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THE

PRINCIPLES OF NATURE,

AS DISCOVERED IN THE DEVELOPMENT AND STRUCTURE OF

THE UNIVERSE.

THE SOLAR SYSTEM,

LAWS AND METHOD OF ITS DEVELOPMENT.

EARTH,

HISTORY OF ITS DEVELOPMENT.

BEING

A CONSISE EXPOSITION OF THE LAWS OF UNIVERSAL DEVELOPMENT, OF ORIGIN OF SYSTEMS, SUNS, PLANETS; THE LAWS GOVERNING THEIR MOTIONS, FORCES, ETC. ALSO A HISTORY OF THE DEVELOPMENT OF EARTH FROM THE PERIOD OF ITS FIRST FORMATION UNTIL THE PRESENT. ALSO AN

EXPOSITION OF THE SPIRITUAL UNIVERSE.

LAW OF EVOLUTION.

ORIGIN OF LIFE, SPECIES, AND MAN.

PREHISTORIC MAN.

GIVEN INSPIRATIONALLY,

BY

MRS. MARIA M. KING.

IN THREE VOLUMES.

Vol. II.

HAMMONTON, N. J.:

A. J. KING.

BOSTON: COLBY AND RICH.

CHICAGO: THE RELIGIO-PHILOSOPHICAL PUBLISHING HOUSE.

1880.

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PHILADELPHIA:
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PREFACE.

THE design of this volume was briefly stated in the preface of vol. I of this series. The original plan has been adhered to, which was to devote vol. second to the continuation of the exposition of the Material Universe. It is the aim in this volume to elucidate the laws of universal material development, as far as its scope and the subjects under discussion will allow. The previous volume concluded the history of earth's development to the planetary stage. Commencing with the period of the formation of the planet's crust, the first chapter treats of planetary eras, the nature and characteristic action of each, and the principles involved in the successive changes of surface conditions, evolution of forms, etc. Chapter second treats of progressive development of the surface and forms, specifying stages of progress and means of advancement, with laws and principles connected with these of the utmost importance to a proper understanding of the law of evolution and the path of progress of a planet from

chaotic conditions to the habitable stage. Chapter third contains an enunciation of the law of creation, or of the origin of life, law of evolution of species, and of man; tracing the origin of Procreative Force in a universe in chaos, and following its successive transformations until it became an incarnated force, the one only originator of forms of all grades and varieties, including man. The key to the law of evolution of species is revealed in the progress of matter and forms by stages, each successive one of which is a platform, so to speak, upon which the next is built, and without which it could not be evolved. Strict scientific principles are involved in all this thorough exposition of the law of evolution and conservation of force; and readers will do well to give special attention to the principles involved, and the line of argument followed throughout the chapter.

The fourth and last chapter contains a brief history of the race of man from the period of its evolution through the prehistoric age, with an analysis of the principles governing in the evolution of races, social forms, languages, etc., etc.

What reference to spiritual laws and forces this volume contains could not be deferred to vol. III, for treatment, since the material and spiritual are so intimately connected in evolutionary processes, that the law of material development involves spiritual development, as well.

HAMMONTON, N. J., *Dec.* 20, 1879.

INTRODUCTION.

AFTER fifteen years, the period which has elapsed since the introduction of vol. I, of this series was penned, the writer again greets the public, and calls attention to the closing volumes of the work then introduced. It is fitting that the causes should be given which have so long delayed the publication of the two volumes now presented. In 1867, they were written with the view, in my own mind, of immediate publication, if it should seem that the means could be spared for the purpose. The volumes, as then written, were voluminous, comprising nearly double the amount of matter contained at present; and it was not consistent with the limited resources at command, to publish at that time. The attempt was, however, made, and fifty pages stereotyped, when other work was interposed, less expensive, which stopped this for the time. Finally, the enterprise was deferred to a "more convenient season," after the expense of the smaller works had been incurred, and the costs fully counted, of continuing the work of publishing the larger volumes. Then my strength failed. It seems I had exhausted what nervous energy could be spared at that period of my life, and work of this character must be abandoned for a time. The

"valley" was reached that interposed between two stages of labor; and repose and reinvigoration of spiritual energies, were required to fit me for further work. The volumes were "laid on the shelf" almost in dispair; and the years rolled around, bringing no prospect of completing the work, which was as my very life; I having devoted the best strength of my maturity to it, nothing, not even friends, or the world's goods, or life itself, seeming of equal value to me to the work laid upon me to perform, without my seeking, by the Powers above.

Some years since I began to realize, indefinitely at first, that if my volumes ever saw the light they must be abridged. In waiting, I gathered strength and energy to *re-write the two volumes entire*, but in abbreviated form. In Feb., 1878, I took up the work, thinking to look it over and leave out portions that could be spared from the original text. To my surprise, I commenced to re-write it; working in that year until my strength gave out in the spring, by the return of the periodic Asthma, that had been my ailment for years. This scourge had relaxed much of its rigor, as it appeared as the summer advanced, and I began to feel that I had really, as I had been led to hope, so far overcome it that work in my allotted field might be continued, and the goal of my hopes be attained in the completion of this work, and some others promised. The winter of 1878–9, found me able to continue the labor begun the previous one, which I have carried on to completion, in this winter of 1879–80.

I have been led on, from step to step, of this experience, as by the hand of one who could discern the end from the beginning, as it now appears to me. While in the depths of the "valley" that skirted my "mountain of power," I could not pierce the darkness that en-

veloped me; — could not conceive why I should be thus called to a work I could not finish. My spirit was subdued into acquiescence, by the reflection, that nothing could be gained by murmuring against fate, but much would be lost to me if I suffered mental disturbance to aggravate my bodily weaknesses. I suffered the exhaustion of my physical powers to such an extent that I was near giving up to die; though the point was never hardly reached when I could believe that my work on earth was done. "The will of God is best," thought I, "my feeble work for mankind can well be dispensed with, since there are so many workers more able than myself, in the field I occupy as a writer." Again and again, I reiterated this sentiment to myself, in trying to silence the complainings that would arise, in spite of all the philosophy I could muster. A cup was pressed to my lips that it was hard to drain; and it was spared me. The draught which replaced that one, whose bitterness had been tasted, was a sweet and inspiring nectar. The light of the day that at length dawned was as brilliant as the darkness of the long night had been dense and appalling. I rejoiced with great joy, when it appeared that I had not been misled by a Will o' the Wisp in being led to believe that my work, such as it was, was to be done as promised. My revered teacher and spiritual prompter had not commenced his warfare with my imperfect nature, to cultivate it to the stage where it might serve him, without counting the cost to the last farthing. I found that the years of quietude and physical weakness had borne rich fruit. My powers had brightened with an acquisition of spiritual strength. Development had progressed, weakness serving as a means of spiritualizing my forces. Experience, observation, and some reading, had increased my capacity of being an expositor of principles. My

teacher had planned it all, making circumstances serve his purposes; but had not revealed to me what would have served me no good purpose to know; and by concealment, effecting what could not be, by other means.

Readers of the first volume of this work need not be reminded of its imperfections of style, composition, etc.; but, I would say in regard to it, that as my development has advanced since its publication, I have noted the imperfections, and bewailed them. I have felt that the work was worthy a better brain than mine, a mind better stored with facts and principles, to serve as a ground-work upon which the teacher could build his structure of principles. I have come to the conclusion, however, that it is best to submit patiently to the inevitable; knowing, as I do, experimentally, that mediumship is progressive; and work must be commenced, if at all, before a subject is as well qualified for it as he or she may become under the tutilage of a wise prompter. I hope my work here is better done, as it surely should be, as the fruit of an extended and severe experience of years of anxious waiting, and enduring the discipline of a guide, as severe in his methods as he can be, in justice to my constitution, physical and mental.

In presenting the two remaining volumes to the public, I beg indulgence in remarking concerning mediumistic authorship, that it is not to be judged exactly by the standard applied to ordinary authors. The difference between the two grades is this; the one is master of his subject before he begins the work of writing it out — or at least, is supposed to be — and writes from a prearranged plan, having an arrangement of ideas in his mind which it is his labor to transfer to paper; whereas, the other, writes at the dictation of another what is new to his mind, the language and ideas flowing as impelled through the channel of his brain from another brain.

Now, what is inconceivable to most people at this day, is this; that it is an advantage to the prompter in securing the best results, to keep the mind of the subject, or writer, in expectancy, while preparing it to be the channel for his thought. In my own experience, the plan has been rigidly carried out, of concealing from me the most important principles until the moment of their delivery for transmission to paper. There has, inevitably, been a struggle, as a travail of brain, before the birth of thoughts which have appeared to me as transcendently grand; as though the law were applicable here, which fixes it, that throes precede every noble birth. I am confident that the exercise of mind and brain induced by the aggravation of waiting and expecting what does not readily come, and the effort to grasp the thought but vaguely conceived, if conceived at all, and revolving all possible modes of expressing some idea, conceived as the right one, is just the needed discipline of the forces to prepare them to give proper expression to a thought new to the mind. I have been sorely tried by this enforced method, as it has been apparent to me that I am at a disadvantage through it, from the fact that it is impossible for a spirit prompter to give the same expression to thought through a subject's brain as he would himself directly; or to do equal justice to himself as in the latter case, or indeed, to do exact justice to the subject, whose capacity for expressing thought from his own mind is not always to be measured by what he says by spirit-impression. A prompter cannot impress his exact style on composition transmitted through a medium; neither can he that of the latter; for his effort to give his thought the clearest expression possible, involves the necessity of commanding the subject's mind so completely as to obscure thought, memory, and power of expression, as circum-

stances require, in order to give him the entire use of the brain and mind forces. Control for the purpose of expressing in plain, comprehensive language principles of philosophy and science, is attended with difficulties and severe labors, of which the common reader has little conception. The instrument shares fully in the labors and perplexities, the latter being greatly augmented by the inability of the public to comprehend the difficulties attending upon the effort to do the best possible justice to truth, even at the risk of presenting it in a clumsy manner.

I would not forestall criticism by these remarks, but only call attention to an important principle to be taken into account in judging of my work. I would further add, that what of error or misstatement may be revealed in these pages to critical readers or scientific experts, may be attributed to my ignorance and inability to comprehend the thought of my inspirer. I have acquired perfect confidence in the wisdom and good intentions of my guide and teacher, by years of familiar intercourse with him in acting as his subject; and am persuaded beyond a peradventure, that where there are faults in my mediumistic work, they are attributable to my own imperfections — not to my teacher's, in any sense.

It is no flowery path I have trodden to reach my present stand-point; but as thorny as it has proved, I bless the power that has impelled me along in it. Murmuring at Heaven's plan would ill become one on whom so much of blessing has been conferred with the trial. The sufferings are lost to view, while the angels smile and open to my gaze the gates of the celestial city, and beckon me on to more extended views within the spiritual realm.

These chapters, as they now stand, have been written, without the aid of a scribe; my own hand performing

the work which, in case of volume one, and these two at their first writing and my smaller works, was imposed upon my husband. I had outgrown the necessity of the interposition of another's magnetic force, to stimulate my own and help the process of control, when this later labor was commenced. This was the attainment of a superior stage in my mediumship; although the help my husband gave me, at first, was extremely valuable to the teacher, and interfered as little with the latter's thorough control of my forces as is possible where one or more are required to form the current of force for controlling. His susceptibility to spiritual influences was nearly equal to mine, in these first stages, and his forces were, in consequence, under the control of the circle in spirit that aided the teacher.

What changes have been made in the volumes by their revision is chiefly in curtailing details. Principles have been added, which were reserved for insertion now; and some presented in vol. I, have been more fully and clearly explained than they could be then by me. The effort has been to condense, and omit as little as possible, consistent with the contracted scope of the volumes. I commend my work to the public, at the dictation of the mind that inspired it; expecting no more for it than the credit its merits deserve.

MARIA M. KING.

THE

PRINCIPLES OF NATURE.

CHAPTER V.

EARTH'S GEOLOGICAL DEVELOPMENT. PLANETARY ERAS.

FIRST PLANETARY ERA — SECOND PLANETARY ERA AND EVOLUTION OF WATER, ETC. — INTRODUCTION AND USE OF ORGANIC LIFE — THIRD PLANETARY ERA, ITS ACTION — FOURTH, ITS ACTION — LAW OF EVOLUTION OF LIGHT — DEVELOPMENT OF CONTINENTS — LIFE IN FOURTH ERA, ETC. — ELIMINATION OF MINERALS — EVIDENCES OF OLD CONTINENTS — FIFTH PLANETARY ERA — CONTINENTS, ETC — SIXTH PLANETARY ERA, ETC.

IN the closing chapter of the first volume of this work, is given a minute description of the action of forces in the evolution of planetary conditions. It is unnecessary to repeat this in narrating the history of the First Great Planetary Era, which is, in part, a repetition of that of the closing era of the Cometary stage. Action awoke after the night of the last Era had given place to the morning of this. The ages had been many wherein rest had been the condition at the surface of the planet; and matter was preparing for the re-awaken-

ing that should initiate a higher stage — the first stage of planetary development.

The order of action in the First Planetary Era and in each subsequent one, was the same as in the Cometary Eras. It developed intensity by slow degrees, as ages advanced, unfolding, stage after stage, of surface development, and affecting, at length, complete solidification of surface matter, and its preparation to enter into the form of stable species of rock. The characteristic action of the Era was to cool, condense, and solidify, surface matter, preparing it for the action of the next era, which should further advance these objects, besides other important work. The eruptive forces periodically active over a great portion of the surface, served the purpose the same forces had in the last Era; viz., to further condense and purify matter, and eliminate the elements from surface substance, in greater purity than they had hitherto existed. It was a working over of matter still, by the fiery ordeal that was in progress; and now, far more was effected in the same space of time towards forwarding the evolutionary process than ever before. The era was a less active one than that which immediately preceded the late period of repose, as it was the opening one of a new cycle; but matter was so far advanced towards solidification, that it required only the more subdued action of this era to complete that end.

During this period the atmosphere exerted a more powerful influence, comparatively, towards cooling surface matter than during the last active era, from the fact, that elemental action of it was intensified by the influence of ultra planetary forces. Greater diversity of climate in the different zones resulted from this; and heat was modified, and the cooling process advanced, while atmospheric matter was becoming appreciably

affected by the intensity of action of its forces. The disturbing forces of the Solar System — the great and lesser vibrations and oscillations, were combining their influence with those of the individual body for the furtherance of the developing process. The variability in breadth of the zones of greatest heat and cold caused by variation in obliquity of the eliptic, and alternations of heat and cold in the northern and southern hemispheres, caused by the change in the relative positions of the earth and sun in summer and winter, effected by oscillations reaching their maxima at widely separated eras,— these occurring through the era of condensation of cometary matter, and through the stages of planetary development, were forces that added intensity to the others in operation, and therefore greatly aided in unfolding planetary conditions. Polar cold co-operating with equatorial heat in the atmosphere, for the immense ages while the planet was a molten mass, and, from pole to pole, swept by fiery surges, was the means of qualifying the atmosphere for being a conductor of solar influences to the surface. So apparently inappreciable was this influence through the Cometary stage and the opening era of the Planetary, that it was as though the fiery vapor that was reacting with the liquid heated mass of the body was acquiring accessions of heat rather than imparting a cooling influence to the latter. Yet, the ages accumulated not in vain; what was apparently a repetition of the same process through eras whose length, to human comprehension, was as an eternity, was the necessary action for accomplishing the result; and no one age could have been dispensed with; as, in each successive one, some new force was unfolded to be added to increase the aggregate, and stimulate others.

Action was for evolving the basic elements in their purity; and, until this was accomplished, chaotic conditions must prevail. Diffused in the heated mass of the body and atmosphere, they were perpetually entering into evanescent combinations, as the play of forces brought into contact affinitized elements of the grade to enter into chemical union, but whose affinities were too weak to withstand the disintegrating force of the intense heat, for any length of time. Transmutations of energy from one form to another, were thus the order, without cessation.

Down to the Era in question, stability of chemical compounds was impossible, from the universal prevalence of heat. But now that the cooling forces were so effective at the surface and in the atmosphere, and surface matter was qualified for solidification by the refining process it had undergone, chemical action exerted its influence to more apparent purpose.

Mineral compounds began to assume a semi-permanent form. A crystalline crust was formed to the lava mass as rapidly as sections of surface became sufficiently condensed to resist the action of the subterranean fires; which fires caused the heaving and surging of surface matter until it had reached this stage; when the eruptive forces found egress in channels, or at points where, from some cause, condensation had been less thorough. Thus were formed, at first, nuclei, which aggregated to themselves crust, until the conjoining of islands and continents that dotted the ocean of lava, formed a consolidated crust over the entire planet, except where chasms or fissures remained as vents to internal forces. This crystalline rock was at first most unstable. It yielded, again and again, to the force of heat, after solidification had formed large tracts of solid surface, as in the last era; and when, at length, stability of crust

was established, it crumbled into ashes before the disintegrating forces exercised upon it.

The Era was of a length to have included within it the entire period from the Azoic age to the age of man. It is termed, The Fiery Era, in contradistinction to the succeeding one, The Watery Era; and from the force which characterized it more than any other planetary era; viz., heat. Waning, it still retained this; for, at the surface, until near its night, eruptive forces were at work; fiery abysses yawned, and heated gases ascended into the atmosphere from innumerable cavities, causing it to remain one mass of heated gaseous vapor, too gross to transmit one genial influence to the surface from the parent sun. When, at length, the night of the era closed in upon the planet, there was universal quiet. Activity of the eruptive forces had subsided, fissures and cavities had become closed, — the surface was completely consolidated. What gases escaped from the smouldering fires beneath it found channels of egress where broad cavities had been, and the loose structure of the crust furnished the necessary vents to pent up forces. Quiescent energies were gathering strength for renewed action on a higher plane in the succeeding era.

The day that succeeded this night opened on a world enshrouded in mist. Glorious morning! that gave birth to the incipient moisture that was the forerunner of water; the promised morn, that was withheld only while the preparatory process was going on that should make its coming possible! The opening of the Second Planetary, the Watery Era, was a most important epoch in planetary development. The atmosphere had arrived at the stage, when the stimulation of its forces, which marked the introduction of the new era, instituted a new order of action within it. There was added

to the forces that had hitherto wrought within it and upon surface matter, another, that so strengthened the affinities of substance that a new form could result. The combinations of the gases that compose water, that had before been too ephemeral and incomplete to effect anything permanent, now gave place to the stable compound, water, in the form of mist, or vapor of water. Held in suspension in the atmosphere while this was too heated to permit of the aggregation of particles, it formed an enveloping stratum to the body of the planet, which was a powerful agent for stimulating progressive action at the surface. The gaseous fluids that escaped from the crevices in the crust, and from the decomposing fragile rock, eliminated mist; and, over the entire surface, it was as though all things were to become evaporated into steam. "The waters above the firmament" were not "divided from those under the firmament," until condensation of this mist resulted from the further cooling of the under strata of atmosphere and the surface. The Era of Mist composed half the great era, and gave place to the Era of Rain, properly called, for the last half of the great era was characterized by the fall of rain, as condensation of mist was continually going on when action was sufficiently energetic to evolve it, until three-fourths of this minor era had passed.

The reader will understand from preceding chapters, that a Great Era is composed of minor ones; that each subdivision of a great era is itself subdivided, by the same law; and that subdivision is the order down to short periods of a few years; the grade of energy marking each waxing and waning, according to the same law that prevails with the great eras, cycles, and compound cycles of eternal periods. Characteristic action changes as forces have accomplished some new evolution; and

thus epochs mark the subdivisions, great and small, as they do the opening of a great era. The great epochs of the Watery Era were three; viz., first, that which instituted the era—the beginning of the evolution of water; second, the period of the first condensation of mist; third, that of the cessation of this condensation, which was the close of the era of rain. The characteristic action of the great era was the evolution of water; which was continuous through the greater part of the era when action was energetic. The waning of this action marked the decline of subdivisions, and the waxing of it, their opening; while its cessation for long intervals, and accompanying quietude of other forces, indicated the periods of rest between the larger minor eras; and only partial cessation of these, showed the partially inactive periods that intervened between the smaller. The above will apply to all eras, and is sufficient explanation on these points applied to all subsequent periods.

Every era is characterized by some form of action which is peculiar to it more than to others, and which appears with it, as the form of energy born of the restimulation of forces. Thus; in the Fiery Era consolidation of surface matter was the characteristic action; being as peculiarly so as the evolution of water was to the next; although other forms of action were propagated into it from former ones, as this and other forms were continued in later ones. Progress signifies the stimulation of forces, and the evolution of new forms of force to co-operate with those already in existence; and the order is, that the succession of eras in the life of a world is the succession of evolution of the forces that develop and characterise it. One after the other, appear the forms of force that a planet develops, that are the great agencies of evolution; a whole era or a succession of eras being requisite for the purpose of

evolving in sufficient strength, what is to constitute a prime factor in future evolutions. Water in quantity to serve Nature's purpose as a qualified agency for co-operating effectively with all pre-existing forces for evolving still higher conditions and forms, could only be produced by the action of a great era; for the conflict of forces was such at that early period, that it was but slowly that the higher gained the ascendency, and subjected the lower to the service of superior uses in the progressive scale.

Fire still contended for the mastery while mist prevailed like a thick curtain over the face of the planet. In active intervals eruptive forces disturbed the surface; and craters, fissures, and broad chasms, belched forth flame into the atmosphere, that seemingly retarded the cooling process, which process must proceed, or condensation be prevented. During the era, craters that were properly volcanic were formed, also volcanic ridges; and these were numerous in equatorial regions, where eruptive forces are always most active.

As it was in these most energetic periods that evolution of mist proceeded most rapidly, it appears that eruptive action was a necessary concomitant of the activity of this other prevailing force; and, therefore, was a necessity to its continuance; though heat was the great retarding force to this new species of evolution. It was overcome through the agency it had itself been instrumental in developing; thus exemplifying the great principle, that a use which is outgrown becomes an evil that must be overcome by agencies that, in some way, have sprung from it, or been dependent upon it, in part, for their existence.

Evaporation was ceaseless during the long ages of the era, and long, long, the rain in falling was dissipated before it could reach the surface or serve any purpose

but to be re-absorbed into the misty veil that was shedding drops of moisture, like the cooling cover to a boiling cauldron.

The ages passed like the moments of a long day, accomplishing as little, yet each in its place as indispensable, and all together, at length, bringing about the important consummation of the cooling process to the point when the surface could retain water upon it. The ages sped on, and another consummation was reached; — the earth was enshrouded in a watery mantle. The rain and the perpetual elimination of water from the gaseous substance of the surface, had formed a stratum of water above the rocky stratum that was awaiting some agency to help in its further consolidation other than those that had previously been active. It was an important epoch when this force was added to Nature; for it served as the weight that compressed the brittle surface rock, and added firmness and stability to its structure, besides exerting upon it a strongly solvent power, and extracting elements from it that it would yield up to no other existing force. The prevalence of water on the surface at the close of the era was universal. Fissures in the crust were closed and covered with a stratum of water, when action subsided; yet, as at the present day, necessary submarine vents were opened by the confined forces, during the long period of quietude that intervened before the next active era.

The water of this early period was of such specific gravity as to form a condensing stratum to the crust almost equal in strength to earth of an equal depth. It was not the pellucid element that it now is, but was thick and slimy, and dark with impurities. It corresponded with all other elements of that early time, when form was in incipiency, and matter of all grades was commingled in the gross, gaseous atmosphere, the par-

tially condensed body, and this gross form of water. It held in solution the elements that composed surface matter in such amount that precipitation followed as an immediate consequence of its accumulation on the surface. Thus it contributed, at the same time, strength and material to the crust, and prepared the way for organic forms. The latter were the next in order of evolution after water and the mineral forms that resulted from the co-operation of this element with surface matter. The foundations of the Mineral Kingdom, that were laid when a solidified crust was formed, required to be strengthened by the addition of a new force. This force was to add material to it of a kind to enter into chemical combination with the constituents of the frail, decomposing forms of rock, and re-form them on a basis of stability. When this was effected, a foundation had been laid upon which the Organic kingdon could be built.

Towards the close of the Second Planetary Era, when cooling processes had prepared the way, organic life first appeared. The floor of the primal ocean developed protoplasmic beds, which derived their germs of life from the Magnetic Forces that were, from eternity, co-operating with gross matter for the promotion of life. Spiritual forces and material magnetic elements interacting, originate all life and force. The life germs of every possible form of life and of matter are supplied by the dual element composed of these two forms of force, progress consisting in the development of this force in higher forms as evolution proceeds. The vitalizing fluids circulate in currents for the use of matter wherever there is action in progress that can evolve its forces to co-operate with those of spirit which gravitate to the material plane, where the attractions of matter call them.

Evolution is, emphatically, the perfecting of these forces — this gradual unfoldment to the ultimate stage where shall be exhibited in perfected form the life principle that is akin to the Deific Life of Nature.

These circulating currents of force were attracted where matter was in a state to eliminate a like force to co-operate with them, — where the incipient force just coming into being was reaching out after a positive wherewith to link itself for the perpetuation of life. Matter progressed by virtue of the interaction of such grades of magnetic forces with it as called out its highest forces, — as coerced, as it were, the elimination of a volume of force affinitized to it sufficiently to co-operate with it as its negative, after the stage was reached when travail for birth began. This interaction culminated in higher births, and resulted after stimulation of natural forces had effected their utmost towards bringing out the forces of matter. At the period in question, the ocean bed, in localities where matter was ripe for a higher evolution than had hitherto been effected, was made a matrix where spirit concentrated force after a higher plan than was possible in the lower stage of matter.

Cell-life was instituted as the consummation of the plan foreshadowed in the crystal. The gellatinous substance forming protoplasm was a form of matter susceptible to forces that could not actuate mineral substance. It was an aggregation of substance magnetic in a high degree, as being the evolution of the highest forms of matter then in existence subjected to the highest forces the planet had developed. The ocean bed furnished this matter; as the water was the powerful agent for evolving the forces of matter required to bring it to this requisite stage. The plane of organic life is that where spirit assumes the ascendency over matter in

such a degree as to fashion for itself a *brain* from which it can react to advantage with the forces it helps to condense into a form. The Elementery and Mineral Kingdoms both foreshadowed this plan, in the methods they developed whereby substance aggregated into elemental and mineral forms. Aggregation of substance to form a mineral is affected by a similar law to that operating in the organic kingdom for assimilation; but the plan in the latter case is superior, since it is susceptible to the variation exhibited in the progress of this kingdom from the first vegetable forms through both the Vegetable and Animal Kingdoms to the human type. Organized forms prefigure the Universal Form, in which Deity is enshrined in a Sphere of Force separate from all inferior force, and yet conjoined with it in such a manner as to act with it, for the perpetuation of all life. Interaction, interdependence, is the law between the interior, which is the Superior sphere of the Universe, and every atom thereof, as it is between the brain and all other forces of an organized being; and there is no escape from this law, in the one case more than in the other. This illustrates what is pertinent to the law of institution of organic life. Progress ever tends towards outworking the plan of Deific life. The minute cell that was the vesicle wherein was first concentrated magnetic life after the plan of a brain or sphere, from which spirit with its related magnetic forces can act free from the direct contact of gross matter, was this plan in embryo, after it had been conceived and was near its birth in the Animal Form. The process of its formation was the coming together of forces in these germinal beds, which acted for procreation, and thus generated a nucleus of a form, concentrating spirit and its related elements in force to repel from its close embrace grosser substance, so preserving to itself power to react with

the latter as a force qualified to build a form after the organic plan. The plan was in the escences so concentrated; it was outwrought as germinal life always outworks the plan of the parental organization, subject to what changes may be instituted by radical changes in magnetic conditions operating on parents or progenitors at the period of generation.

The first form — who, or what, fashioned it? What was its sire, and in what matrix was it conceived? It was fashioned after the semblance of the slimy ooze whose forces had conspired with the etherial dual force for its generation, and bore also in its structure the impress of the superior force concerned in its evolution; and the matrix where it had conception was the ooze which germinated with cell-life. The first forms were incipient cells. These were multiplied over the sea-bed until a force had been generated to co-operate with spiritual force of sufficient strength to perfect the cell, and to commence the building of more complex forms. The starting point of the variety which was to characterize the organic kingdom, was where the first germinal cell-life was impressed with the characteristics of the qualities of matter and elements distributed over the surface. Life, species, of all varieties, were to correspond with the varieties of forms of matter,— the combinations of which the elements were susceptible in the progressive development of the planet. Variation was to be effected through the law of generation; the law whereby the generating forces impress their image on resultant forms. This is the law of parentage, from the inception and birth of a world until its last form has been generated, bearing the image of the forces concerned in its creation. Accretion of cells by a plan, or after a pattern which was not in the material world, is the mystery of formation, which finds its solution only in the foregoing prin-

ciple ; viz., that Spirit impels formation after a pattern within it so nearly allied to that which embodies the material force with which it co-operates for generation, that it is possible for the two to coincide in one resultant form. This form will be different in specific characteristics from the material progenitor, but will bear the stronger impress of the spiritual, or positive force. Thus it was that cells were globular, after the pattern of a sphere, with forces radiating from a nucleus. This form was that which spirit assumes in all germinal life, from the fact that it ever acts upon matter in nucleated atomic spheres, the nucleus itself being the atom of Deific Life which inspires all life. Life were not, but for this mode of action prefigured in the first cell-life, in the drop of water, or the globular form assumed by fluid matter under certain conditions. The crystal is an approach to this form when matter is on the antecedent plane to the organic. The sphere implies the idea of Deific action. The cell was an idea embodied in elements, as the mechanic embodies his idea of a machine in material fashioned by his hand. It was an idea conceived in wisdom, for it was the perfect plan that was not to be outgrown, nor improved upon, as regarded the mode of organic life and formation.

Cell-life was to be propogated as all life ; the sphere of force with its nucleus of concentrated forces to react with outer forces for augmenting accretions of cells, and carrying on structural unfoldment and prolonging functional activities, was the perfect plan, and could not be outgrown or superseded. Once the start was made, and this force incarnated in the simple material cell, the enginery of organic life was started. Cells divided ; accretions of cells resulted from the increasing susceptibility of matter to the action of the higher forces, after spirit had become incarnated to act as a propelling power to

work out the ideas of formation prefigured in physical Nature as they existed in spirit. It was a step at a time, in the direction of developing complexity of form. Budding was succeeded by the mode of vegetable life, where cells combine to form fibers; being built upon each other, after the manner of laying one stone upon another to form a structure. The simple plan of the first vegetable form was the augmentation of force by an accretion of cells in the form of a disc; radiation from a center being the plan. Thus the Radiate type of life, which was instituted in the vegetable, was founded.

It must be remembered that forces and forms at every advanced step bore an impress superior to the originating material force; that this material force imaged itself on its successor, and yet was outstripped by that, inasmuch as the higher stage that was reached when the latter was conceived presupposed the addition of a new force to those already in existence. The new birth was consummated by adding another cell or cluster of cells to construct a more complex form, and was effected through the influence of the superior force exerted by the brooding etherial currents, strengthened as they had been by the forces communicated to them by the forms of life embodying the superior force already in existence. It was adding another form to Nature, — another foundation stone to her structure of forms. The law of institution of formation and of propagation of specific differences, is imaged in germinal life of every variety; Embryology teaching the great lesson that science has failed to learn for the ages. This law is also imaged in every superior birth, where generating force produces something in reality superior to parents, and which yet images them in a degree.

The plan of life embodied in the Vegetable Kingdom was propagated into the Animal, with the improvement

of concentrating force in organs, as the brain and other nervous centers. It is unnecessary to specify here the line of progress to this climax, or to particularize more concerning the law of institution and variation of forms. In a future chapter, the subject will be resumed and enlarged upon in treating upon Life, Species, etc.

Conditions were higher after the epoch of submergence of the crust and the establishment of the stability of the Mineral Kingdom, and this was the signal for a new creation. A new force was created by the uplifting of conditions, and it was incarnated in organic forms. This had ever been the order — the evolution of a new force by the process of unfolding a new stage of matter, and its incarnation in some form of matter, to assist as a propelling force to a yet higher stage. Germinal essences gravitate to matter of a grade to appropriate them; and where, as was the case in the present instance, there is no embodiment of procreative force, the law of procreation acts through atoms and molecules of matter subjected to the influence of currents of condensed magnetic forces of the proper quality, and forms result. If this were not the law, life would never have existed; neither organic or inorganic forms could have resulted from the co-operation of Force and Matter. There was a time when organized life was not on the planet; a time when it was being introduced without the agency of parental reproductive force; and a time when the higher organic kingdom, the animal, was being established by some other agency than this. To affirm that all this was effected by the Creative will, does not account for it; for as far as man has been able to trace the Creator's works, he has discovered that all things exist by law, being the products of the operation and co-operation of laws as old as Nature itself. Creation means evolution by law; nothing more, nothing less. The fountain of

law and force is in the Deific Spirit; that is the Supreme Positive of Nature, from whence emanate the laws of matter and the forces that are forever operative within the universe. Mind directs, Will guides, in all things; and the book of Nature appears as if inscribed by the Divine hand with the pencil, Law.

The incarnation of force in organized forms, was a grand step in the progressive career of the planet, to be succeeded by another as important, from the footing established by this. The Vegetable Kingdom formed the basis of the Animal, as the Mineral had of the Vegetable, and as the Elemental Kingdom had of the mineral. The superstructure that was to arise from this foundation, was to cap the climax of material development; for, out of it, and of it, was to arise the crowning form of Nature, Man. Thus it appears how much was accomplished by the evolution of this new force.

The inception of the first forms of life upon the planet heralded the era of formative energy, wherein matter was to be subjected to a developing process higher than any that had preceded this, and effective for unfolding its intrinsic possibilities. Thenceforth, forms were to succeed each other in such profusion, that to number them from this period to the age of man, would be like counting the leaves of the forest. Matter of the planet was to be regenerated by passing through these varied forms. The sepulchre of one grade was to be the birth place of another; the ashes of the decayed forms of lower species was the material from which higher ones were to be evolved.

By the law above stated, the evolution of the Vegetable Kingdom was the creation of a force that, in cooperation with all others, pushed matter on to a higher plane still. From the starting point established in the Vegetable kingdom — the Radiate Type, evolution ac-

complished the establishment of the Animal Kingdom. This was carrying out the original idea of formation to the point where the semblance of the perfect idea was enstamped on forms. The first animal type vaguely embodied the idea that found perfect expression in Man, — the idea embodied in Nature as a whole.

Cell-life, in its consummation, originated the living, breathing, moving form, endowed with brain, nerve, vital circulating fluids, and vital organs to serve the form, a body complicated in its structure, fitted to this complicated vital mechanism. Wonder of wonders! what a force is this Life Principle condensed in the infinitesimal Sphere within the nucleated cell!

The Vegetable Kingdom was germinal when the Animal succeeded through it; that is, it was in incipiency; having as yet developed only inferior orders of marine plants. The interdependence of the two kingdoms is fixed by the law of the constitution of each. Hence, it followed, that when vegetable life was developed in profusion over the sedimentary beds, there was created a strong attractive force for some element that was wanting to strengthen the vital energy of species and add stability to the structure of plants. This was what was requisite to co-operate with other forces of Nature for the introduction of a higher force, one that should be incarnated in a higher order of forms than the vegetable. This attractive force coerced, as it were, the incarnation of the next superior force — the institution of Animal life. Thus it appears that interaction of the elementary forces of the two kingdoms resulted as soon as the lower had been conceived, so to speak; as soon as it existed in sufficient strength to evolve the force above designated. The Animal Kingdom supplied the necessary element to complete the stability of the Vegetable. This principle was illustrated in the consolida-

tion and completion of the crystalization of surface rock by the addition of water to the forces of Nature, which was itself an evolution effected on precisely the same principles as that just described. The Elemental Kingdom derived stability through the Mineral, its immediate successor, as the latter did through water and the forms of life of both organic kingdoms to which this element was instrumental in giving birth, that survived its evolution.

So it appears, that interaction of superior and inferior related forms is the law of their existence; such interaction as makes the inferior, which has priority of existence of the superior, dependent upon the latter for a force it does not itself possess; a most important principle, to be considered fully in discussing origin of species.

The earliest vegetable forms were as unstable as the earliest forms of rock. After the advent of Animal life, when both kingdoms were in their infancy, the forms of both were frail, and crumbled to ashes readily by the action of the forces exercised upon them. They were earthy in their structure, and served to eliminate from earth and water elements of impurity, that, by passing through this first ordeal of formation, became fitted for others. The waters of this early period imposed upon beds of rock of the proper quality, became a crucible wherein matter was undergoing the refining process that was indispensable to prepare it to enter into the constitution of high forms of rock, and of marine and terrestrial life.

The rocky foundations of the great deep were incomplete until testacea had, for ages, strewed the ocean bed, and become consolidated into rock, after complete or partial decomposition. The unstable forms of the earlier ages of the formative era (as the era of evolution

of organic life and unfoldment of both kingdoms may, with propriety, be termed,) are not preserved in fossil remains; yet, they have left their record in the stable rocks of the lowest Azoic beds; and their successors of immediately succeeding ages, when a degree of stability of organic forms had been established, testify to the efficiency of Testacean deposits in forming rock of high quality. The limestone formations of the Azoic beds are monuments recording the mode whereby Nature built up out of the imperfectly crystalized rock of the early eras, a surface structure whose stability could withstand the changes that must necessarily accrue while the planet was outworking its higher stages. The insignificant denizens of the deep were the architects that moulded the crust into form after the waters had prepared it for their handiwork. Thus does it appear how Nature's forms are interdependent — the higher upon the lower, as well as the lower upon the higher.

The oldest traces of animal life now in existence are in the Azoic limestones; and of vegetable life, in the anthracite and graphite these beds sparcely yield. The unnumbered ages of the first three Great Eras and a portion of the former part of the Fourth, were consumed in depositing the Azoic formation; and during the immense period, from the latter epoch back to the beginning of the latter part of the second era, organic life of both kingdoms flourished and decayed; generation after generation taking up the work of reorganizing the elements, until it was so far accomplished that a new order of things could be introduced.

The Second, or Watery Era was succeeded by the Storm Era, as the third is called, from the action which characterized it. It was an era of spasmodic wind storms. The atmosphere had arrived at a stage where

its elements could be actuated, more than formerly, from its upper to its under stratum, by the cold of space; but not as at the present day, when that serves as an equalizing influence, modifying equatorial heat and polar cold. The gaseous, vaporous atmosphere of that era was of such a density as to prevent this thorough equalization of temperature, while under strata had become sufficiently susceptible to the influence of the cold of upper strata to be swayed by convulsive action through the agency of cold. The principle was identical with that which now produces hurricanes, or wind storms of any character. The eruptive action of the era was spasmodic, or intermittent; and at periods when it was prevalent, and in localities where it prevailed, the intensity of the heat emitted into the atmosphere and conducted through lower strata to where it came into contact with cooler strata, explosions of intense violence occurred, and powerful disturbance resulted in the lower strata. These explosions of wind were like the outbreaks of a volcano in violence, and like the resistless tornadoes of the present, only more resistless — more destructive, if the latter term is applicable where only beneficent ends are served by the warring element. This was the force provided to aid in the pulverization of rock, after it had become hardened by the action of fire and water and organic life. Eruptive action, during the era, formed craters and fissures, whence issued volcanic flames and *débris*, and upheavals along the fissures and around the craters, where subterranean forces were pressing for egress, caused the elevation of surface, which became land as it grew under the action of the elements that were building it up. The universal sway of the waters was broken before the powers of earth and air, that were warring upon them, to gain a foothold for a higher order of conditions than had heretofore been

possible. The winds conjoined forces with the waters; and the waves dashed upon the emerging islands, and over the crests of the low uprising ridges, and crumbled the rocks, causing fragments to dash against each other with such force as to pulverize them into atoms, which were spread over the ocean floor. Waters of such specific gravity under the force of such convulsive wind storms, lashing the beaches and craters, caused the undermining and complete demolition of whole islands, sometimes; leveling the ridges, and sweeping into the deep the *débris* that was needed there to form sedimentary beds of higher order than had before existed. Action proceeded after this manner through the active intervals of the era; and the result was, what the action of every era is — the general uplifting of all conditions. At the close of the era the waters had abated, and islands were distributed over the surface, in many cases, as the nuclei of the continents of the future; sedimentary beds had been vastly thickened, preparatory to the upheavals that were to leave them bare, as the soil of continents or islands where terrestrial life could be produced; the character of the rock had changed; the brittle crust had become consolidated; the atmosphere had become so rarified that the next era, continuing the action introduced in this, would accomplish the work of the "fourth day," referred to in scripture as the "creation" of the "great lights."

The peculiar action of the Third Era was, as a matter of course, propagated into the Fourth, when it gradually became modified, as the rarification of the atmosphere proceeded. Storm action continued to be one of Nature's most powerful agencies for impelling progress of all conditions of the surface, as it is in the present age. Agitation of the atmosphere and the waters by the fierce wind storms of the early eras, after this be-

came possible to any extent, hastened progress wonderfully. The vaporous atmosphere, actuated by the winds of the fourth era, rapidly changed its consistency. Sunlight began to dawn upon the earth, and rays of light from the Moon and distant stars pierced the gloom of the night. Perpetual darkness had hitherto hovered over the surface, except where flaming gases made way for themselves through an atmosphere too gross to admit of the evolution of the ethereal element, atmospheric light, — or whose vibrations produce the effect which is light, in the scientific language of the day. Light was not in the atmosphere as an illuminating element until the fourth great era, designated in scripture as the "fourth day;" and with strict propriety, according to the usages of the sages who inspired the revelations of ancient periods, which are based on phenomena and the natural subdivisions of time.

It will be well, in this connection, to add some explanations concerning light to those already given in the former volume of this work, which were incomplete. Light is a name that has been applied to matter when being evolved, and when it is assuming the first appreciable form or stage; which is rare cometary vapor, visible in consequence of the aggregation of atoms around a controlling center, whose forces coerce condensation. Substance of every nature is thus evolved or condensed from the dissipated atomic matter that is inappreciable when in the elemental state, from its rarity, and distribution in atomic form. Accumulations of substance of different density receive different names; but the rare cosmical ether that is visible by its own inherent light, is sometimes termed light, as above stated. This establishes a precedent for giving this name to the ethers that produce the phenomenon, light. And further; another precedent is offered in the fact, that ethers of

different grades of refinement act upon the organs of vision of different grades of animals, producing the phenomenon, light; while the actinic ray possesses properties that the others of the spectrum do not; showing that an element wanting in light is concerned in the effect of this ray. The ethers of space are as diversified as the forms of matter in worlds that move therein; for they are emanations of these and all the variety of substance and forms they contain. Primeval matter that has not entered into form in the existing universe of worlds is not included in this category, for it is not susceptible to the action of planetary forces, such as are here being delineated, neither is it the evolution of condensed worlds. Worlds, in condensing, evolve atmospheres; and every form of substance, in like manner, evolves an atmosphere peculiar to itself; that is, throws off atoms of substance that are magnetic, and are repulsed from immediate contact with surface substance, and so form a sphere of ethereal matter that has its center in the central force of that quality of substance. Animal forms of every variety evolve magnetic spheres, and these are intermingled grades of spheral matter, the brain evolving one grade, — the highest, — animal tissue another, etc. These varieties compose the ethers of space, as they are as diffusive in their natures as attractive force, and go hither and thither, throughout the universe, which is of like substance throughout — subject to identical forces, all worlds uniting their forces as one, and all subject to the forces of each, and each to those of all. Ethers vibrate to the forces to which they are susceptible; and these vibrations take effect where they find an answering element, or one that can appreciate their forces. Air vibrates to the intense action generated by the intermingling of cold and hot currents, and these vibrations affect gross substance allied in ele-

mental quality with air, while magnetic substance is unaffected by them except through its relations with grosser matter. Water vibrates to the action of air, and the effect of these vibrations is similar in kind to that of those of the more fluid air, to which it and earth are nearly related. Now, were it possible for the senses of man to appreciate the vibratory action of all the grades of ethers that come in contact with the organs of sense, it would be easy to perceive how these are allied to the vibrations of the elements air and water, and how each grade, like the two latter elements, is subject to certain forces, having vibratory motion peculiar to itself, and which is confined in its effects to certain grades of affinitized substance. Light is now defined in scientific circles as the effect of the vibrations of an ether of space upon the sensitive retina, the ether not having been analyzed any farther than in its effects in producing visual and related phenomena. When science reaches far enough into the etherial world to discover the origin and gradation of these subtle fluids, that are so deeply involved in physical phenomena, it will name the element to which the human retina is so sensitive, and to which the mind responds so readily, Atmospheric Light, if it gives it an appropriate name. This ether is magnetic to such a degree that the nerve-fluid responds to it, carrying impressions to the brain, and through this channel to the mind. The vibrations, which are sound, are transmitted to the auditory nerve through the medium of a fluid that is more nearly allied to the nerve than the air itself is, and is hence, a necessary conductor of sound to it. The tympanum appreciates the vibrations first, but does not convey them directly to the brain, as the nerve is not distributed over it, but in the fluid behind it, which catches them and hands them over to the nerve. Sound-vibrations are

not the product of one medium, only, but of several affinitized ones. So visual phenomena are not the product of one grade of the ethereal element, but of several, which are closely affinitized, and are peculiarly adapted to the purposes of vision.

The action at the Sun's surface, which generates the vibrations that affect the human eye, is responded to in space by a very rare ether, but in the atmosphere of a planet this quality of ether is eliminated in profusion by the action of the magnetic rays from the sun passing through it; and hence, the flood of light that overspreads the surface in the presence of the great luminary. The rarity of the refined ethers in space renders it dark, as it is cold and forbidding in every respect. Gross atmospheric matter gravitates to the surfaces of planets, suns, etc.; but the ethers that are more magnetic, more refined, are like the breath of Deity, that is life everywhere — that searches throughout the empire of space for errands of good it may perform in the service of the Overruling Mind. They are, indeed, the link that binds the material to the Spiritual universe, circulating as they do, freely in atmospheres and in space where spiritual currents gravitate to meet them, and conjoin forces with them for carrying on the processes of physical life. Germinal essences, vitalized by spirit, are supplied from ethereal currents to every variety of matter and forms; these currents obeying the attractive forces of the latter when reproductive forces are active, or in periods when formative action is energetic, and matter is aggregating into all the variety of substances and forms planetary surfaces develop. Interchange is thus revealed to be the law between surface forms and ethereal elements floating in space; such interchange as lies at the very base of all surface life.

In the early stages of the life of a sun, before the

planetary stage is reached, and when its atmosphere is of almost equal density with the body itself, the fluid, vapory matter which composes it yields the ethereal light element in exceedingly rare proportions, but this suffices to make it luminous and visible; and as condensation progresses, and heat increases in intensity, and combustion becomes more energetic, the ethereal elements that communicate motion to the ethers of space, are generated in greater profusion, and luminosity of the body increases while it is becoming a power in its system for evolving the forces of its dependent forms. Within the dense atmospheres of such bodies, at the surface where gross, gaseous vapors gravitate in abundance, no atmospheric light yet exists. The ethers that communicate with the human eye are yet unevolved in these lower strata of the atmosphere in sufficient abundance to impress a retina, were there one then in existence. Upper Strata, where the most ethereal atmospheric elements gravitate, yield those that co-operate with other bodies of space. After the planetary stage is reached, this condition prevails until after the vapory atmosphere becomes cleared, and the magnetic action of its mother sun takes effect upon lower strata; then it is that the light is born that illuminates the surface and lower strata. At first the light is dim, as the ethers are rare, and the vapors not yet dissipated; but from its first appearance, in a hazy, cloudy atmosphere, where it struggles, as it were, for a feeble life, it is a powerful agent of progress.

During the Fourth Planetary Era, light exerted its effect upon the earth in good measure. Terrestrial life flourished in that era at periods when surface conditions allowed it, and the waters were prolific of higher orders of life than had previously existed. The magnetic influences of the sun were then powerful to co-operate

with those of the planet, and the life of the latter was of an order corresponding to the superiority of the conditions. Continents first appeared in this era. Eruptive action was energetic in its opening periods, and increased in intensity until after its meridian; and this was instrumental in building up continents.

The islands of the Third Era were, many of them, above the surface of the waters at the opening of the fourth, and formed the germs of larger tracts, which assumed continental proportions before the waning period of the era commenced. The thickening and consolidating of the crust had confined the igneous forces of the planet within its interior, and these could not remain so pent up after the restimulation of energy which introduced the era, but sought egress through old craters and fissures, and wherever the rock was of a character to act as a conductor to external and internal electric currents. Natural plateaus were scattered over the ocean bed. These were sections where eruptive action had piled volcanic *débris*, and the remains of testacea were heaped mountain-high, almost, and commingled with the scoria and decomposed ejected matter. These sections were invariably those where uplifts occurred accompanying outbreaks of volcanic action in the third and fourth eras, and in the latter, the ridges that were either submerged entirely, or but just above the water, widened and lengthened, as volcanic energy disrupted and upheaved crust, and created mountains and volcanic peaks, to melt away and scatter material far and wide under its mighty power, combined with that of the other agencies at work.

These early continents were unstable in character, from two causes; they were developed previously to the thickening of the crust sufficiently to prevent the serious undulatory action which resulted from the in-

cescent activity of internal forces; and they were built up from narrow ridges, which widened by the accession of ridges and the accumulation of matter on their margins, the latter sloping to the sea, and thus subject to submergences at every oscillation of the crust. These continents were mazes of mountain ridges, piled one upon another, in utter confusion, and volcanic to an excessive degree, in active intervals, while interspersed among them, were plains of comparatively small extent, and valleys that sloped to lower plains and to the sea. There were no continental plains interspersed with ridges and veined with permanent river channels; but the rivers, which only flowed periodically, forced their way through valleys, and whatever obstructions had gathered in the old channels during intervals when they were not flowing, and found their way to the sea. River channels windened, from age to age, unless permanently obstructed by upheavals; and floods deposited material and formed, at length, alluvial plains, which became productive, in one age, of low forms of terrestrial vegetation, only to be denuded in the next, and rendered arid deserts, or volcanic ridges. The slope was abrupt from the great central ranges toward the sea; and inland lakes or seas did not exist, only as the pent up waters of overwhelming floods lingered awhile in mountain gorges.

The old continents were subject to forces that may be characterized as most intense; more so than any that have prevailed in any subsequent era. These were periodic, and spasmodic, in a degree, for a portion of the era, but became more regulated during the later periods. Volcanic action was of an intensity unknown in later eras. It sufficed to build continents. This is a sufficient history of this force in this vast period.

To aid it in preparing material for the continents that

were to be, the winds, the rains, the floods, the overflows and submergences of coast regions, prevailed periodically. Mountain peaks and ridges, that had been built up by volcanic force, crumbled through the agency of this and other forces, and sedimentary beds were enriched by the high order of material that could only be furnished by such means. Thus Nature's compensations are sure.

These continents were four in number, and occupied portions of the great areas of the oceans of the present. Polar latitudes were, in that remote era, more prolific in land surface than in any subsequent ones. This was partly in consequence of the direction of the forces in that era, and their surpassing strength. The convulsive throes of the planet were felt from pole to pole; and where the waters were shallowest, which was near the poles, and in opposite hemispheres to those occupied by the existing ones, continents were developed. The main reason why, in the early eras, land was in more abundance in polar regions than in equatorial, was in consequence of the greater depth of waters in the latter, which accumulated there in obdience to centrifugal force. To compensate for this, action is always more energetic in equatorial regions, and upheavals accomplish more for tropical and temperate latitudes than for polar.

The characteristic action of the Fourth Great Era was the evolution of life. Light having been added to the sum of the forces operating at the opening of the era, the stimulation that resulted was chiefly appreciable by vital forces of the order that quicken organic life. This flourished, in consequence, as it had not before. Individuals, species, orders, and types, multiplied rapidly; and terrestrial life was developed. The land of that remote period did not favor the perpetuation of any species of terrestrial life beyond certain limits; yet, low

species of this order of animals and plants appeared toward the close of the era, after the elements had become regulated so as to admit of their evolution and propagation. Vegetable life could exist in few varieties where animal life could not, and the closing period of the era, including its night, has left records of this life in the Sub-Carboniferous strata. A few Amphibians of the first orders in the rising scale of that Type were also developed, and their fossil remains in the same beds, tell the tale that land existed in large sections previous to the existence of the continents of the present.

But marine life reached its climax, in one sense, in the course of this vast period. The Silurian Age commenced in the former part of this era, which, in its later ages, included the Devonian and Sub-Carboniferous; the latter extending into the morning of the Fifth Era. Of the life of these Geologic ages, it is unnecessary here particularly to speak. The reader will find descriptions of it in the Geological works of eminent scientists. Plants and animals of the third and fourth eras, as well as those of the Carboniferous Age, the opening period of the Fifth Era, were highly bituminous and carbonaceous, deriving these substances from the elements, which were then surcharged with them. Vast deposits of mineral oil were made where strata permitted it, before coal deposits could be laid; and after this, the seams of disjointed strata and hollows,—natural reservoirs within the crust—were filled with this oil. The destructive forces which played, for the ages, upon the crust, made havoc with this treasured material, yet, its elements remained in earth's bosom, where heat did not dissipate them, as the treasures of future ages, which should reap rich harvests from the products of these early ones.

The waters, earth, and air, were then all surcharged with every variety of matter that now exists in mineral form; and it was the special work of the forces in action, to eliminate the minerals distinctively, and deposit them; thus purifying the elements, and providing necessary material to serve the uses of future time. No high orders of life, such as are cotemporaneous with man, and lived for many ages anterior to the appearance of the human race, could then exist. As before stated, air-breathing animals of the lowest orders appeared before the Coal era; but it was not until after the long ages that composed that period wherein Nature's energies were concentrated upon the work of clarifying the elements, that any high orders appeared. Vegetation followed the law that governed in the animal kingdom, to the extent that the flora of an age corresponded to other conditions, being of such grade as the elements determined. As the Vegetable Kingdom preceded the Animal for the purpose of preparing conditions for the latter, it followed, that, through the whole formative era, until the highest orders of both kingdoms had taken their places side by side, the Flora of one age was for the purpose of preparing conditions for the Fauna of the next, and so corresponded to that more than to the Fauna of its own age. Thus the terrestrial vegetation of the Coal era prepared the elements for the existence of the reptiles of the next age, and corresponded to them more than to any land animals of the former age. The Monsters that occupied the lands of the Reptillian age breathed an atmosphere that had been cleared of its excess of carbon, by means of the vegetation of the preceding age; but they were amphibians, cold blooded animals, and such as lived principally in marshes, and fed on the vegetation of the moist lands, that was in profusion for their use; while a higher was developing

in the higher lands for the use of a higher order of animals when they should appear, and for which the new Flora was preparing the way. The Tertiary Mammals were preceded by a Flora that nearly corresponded with that of the present. Palms and many orders of Endogens and Exogens appeared as precursory of the Mammalia; and previous to the appearance of the Post Tertiary Mammals, the Flora of the globe was regulated to suit them and man. Thus is illustrated in Geological records, the principle of the interdependence of successive ages, kingdoms, and types; — the law by which all things came into existence. The preparation of the earth for each type of life was complete in every respect before it appeared. Each type served a multiplicity of uses in its existence, among the chief of which was, to prepare the way for its successors.

In the vast laboratory of the deep, chemical action prepared the way for the deposition of the minerals that vegetation and animal organisms had collected from the elements in a cruder state than was consistent with their deposition previous to undergoing a refining process. Decomposition was rapid in waters so impregnated with salts of every variety as were all the waters of the period; and so, as the alternate submergences and emergences of tracts succeeded each other, there was going on the ceaseless process of elimination from one element and then from another, of many of the mineral varieties that exist in profusion at present, in the various forms in which they are found in the stratified crust. Heat served an important purpose for eliminating mineral matter of some kinds from the aqueous formations, where it was imbedded in remains of various kinds. Before there could be a deposition or an elimination of pure mineral substance, there was the indispensable process to which crude matter must be subjected; viz., its

passing through the crucible of form. The rocks that now yield, or ever have yielded, minerals by any sort of action, have been formed from aqueous deposits worked over and over again in this crucible. Nature meant more than is generally supposed by strewing the bottom of the seas and the lands, in all ages, with the multitudinous varieties of life that bespeak the infinite resources of her ingenuity.

So early in the life of the planet — so soon after the crust had begun to solidify and a foothold for life been formed on it, did the process of recombining the material of the elementary rocks begin; and so thoroughly was it carried on in the almost interminable ages that preceded that which developed the higher forms of organic life and of the Mineral Kingdom, that there could be no mistake as to the thorough preparation of all the material of the solidified crust for the use of organization in the later eras. Eruptive forces had brought to the surface the under crust together with new material, and the waters had taken this up, after disintegrating forces had prepared it for them, through the rounds of the ages of whole eras, when fire and water had, seemingly, been contending for the mastery; and when solidification had done its perfect work, so that the waters held sway, and volcanic forces were confined to certain localities, the winds and waves scattered the material they furnished; and so the working-over process was continued in the depths of the waters and on beaches, where organisms used the sedimentary deposits as fast as they were formed.

The Carboniferous Age furnishes a perfect illustration of this law, which can be studied by all. Periodic submergences of productive lands caused disintegration of organic material, which formed beds where a dense

Flora was produced, when emergence again brought them to the surface.

The ages are uncounted in Geological works wherein it is known that this process was going forward; but they are well understood to have been many and long.

This lesson is of importance in respect to giving a clue to the existence of the old continents. The earliest Carboniferous beds must have been enriched with deposits from lands different from the low-lying tracts that formed all there was of the continents of the present. These undulating tracts of the great continental areas supplied material to each other as they alternately emerged and subsided; but it was not enriched with a sufficiency of the material of volcanic rock, which is an important ingredient in soils, and without it in certain proportions, they are not prolific. In the early ages when soils were forming, this ingredient was introduced in profusion; and it required aqueous action to modify it into such form that its elements could be appropriated by organic life. At the early period when the existing continents were germinal in the low-lying lands of the Coal Era, there was wanting on these lands the condition for creating perfect soil-elements, as there was, in part, lacking the volcanic action to supply them. But the lands in juxtaposition with these were those where the most active forces of the era tended, and these supplied the material, as has been before stated, to enrich the lands of the uprising continents. When, at length, action subsided there, to re-awaken on the opposite hemisphere, and the old continents disappeared, leaving few recognizable traces behind them, this one important trace remained, to leave its mark on succeeding ages, that savants might exhume, in theory, the continents that were,— that must have been — and write their history as they write that of the continents of to-

day, from the period when the delta lands of the streams of the old continents were forming. Those delta lands were none other than the germinal tracts of the new continents. They were prepared to produce the vegetation of the Coal Era by fertilization in the manner described. The old continents had served their purpose when they had prepared the way for the new, until later upheavals and other processes of continent-building, should cause the emergence of lands where these were. Delta lands are now forming, and coral deposits are building up, on shallow beds, the foundations of land that will be stable continental surface, at some period after convulsive action has added sufficient force to that of the tiny builders, to make it so.

Remnants of the ancient continents, and of the lands of the third era, are now in existence; forming parts of the continents, and islands in the polar Zones. The Western border of North America, including the Sierra Nevada range with its extension north some degrees, and the slope of the continent west of this, which is a maze of mountains of less magnitude, with plains intervening between the ranges subsidiary to the great range, and with valleys sloping to the sea, is a section of an ancient continent; which was elevated after subsidence, by the action which upheaved the continental plateau. This forms an example of the character of the old continents in a modified form. The highly crystalline character of the mountains in this region, as it is now exhibited, is a result of the forces of the sixth era acting upon the crystalline formation of ridges that were volcanic in the fourth era, but which were beneath the waters during a greater portion of the fifth. These formations were of high character; and when action was energized beneath the great Continental Plateau, to the eastward of the old continent of which this section was part, it was propa-

gated, in part, from this section; and owing to the fact of its being an outlying portion of the old continent, and one where action had been less energetic in the fourth era than on more western lands, the forces of matter were not then so completely exhausted as on the latter. Here, in consequence, was a nucleus where force was generated, that culminated in the upheaval of the section, after the Continental plateau had been partially established.

The Azoic lands of the polar and temperate Zones, are also, in part, sections of continents of the fourth era. These lands were early subjected to the working-over process mentioned on a preceding page, having been under the waters until hardened to their present consistence, which was effected by the means of heat and pressure on rock prepared in the crucible of formation. These lands were necessary nuclei to the continents, old and new. Having been exposed to atmospheric influences for long ages, they were generators of force which instituted upheavals, these stable tracts having withstood changes that have, in some instances, submerged adjoining continental areas.

The stable form of continents which succeeded the old, in the Fifth Era, were built upon vast plateaus, created, in part, from the sediment derived from these earlier ones; and elevated by degrees by the undulatory action, which, at each successive oscillation of the thickening crust, left portions higher than at the previous one, when it was more susceptible to their action. These plateaus, gradually presenting sections of their surfaces above the waters to atmospheric and solar influences, became energized, and propagated energy over the whole territory within their influence; and when, at length, this action culminated, there occurred a general

upheaval of the whole of the vast areas, with the exception of some basins where the crust subsided periodically, and did not respond to the active forces of the period.

The Continental Plateaus, as these are called, were emerging gradually, as described, during the fourth era, and grew up under its forces; though action was far less energetic in those sections of the globe than in the continental areas of the period. The tides of energy rise in one quarter while they ebb in another, during active periods; as is shown by the oscillations of crust, that have been continuous over the surface since the crust was formed, and also by the alternations of volcanic activity between different ranges and on different continents. This law prevails among nations. These sympathize in their vital energies with inferior forces; and when national activity or progress in civilization wanes, in the present great active era, it is a sure indication that the forces of the planet in that section are on the ebb.

The great uplifts that followed the Carboniferous Age, on the American Continent, which will illustrate others, instituted the Plateau by degrees; convulsive action fracturing the crust for long distances, at some periods, and upheaving the adjoining surface on one aside, while on the other, the crust subsided further. In the case of the section of the continent referred to on another page, the fracture weakened the crust where the Great Basin to the west of the Rocky Mountains adjoins the Sierra Nevada range, and the former tract obeyed the impulse to rise with greater alacrity than the latter; which, although an energized section, was weighed down by its connection with the great continental area that was subsiding with the oscillations of the crust which were bringing the new continents into being. It emerged, however, in time to form part of the new continent, and its energies were propagated over the vast area of the

continent west of the "Great interior Continental Basin," which occupied the region of the Great Mississippi Valley, until a comparatively late period.

The eastern slope of the plateau gradually developed its present outlines under the action of the energetic forces that prevailed; the whole continent assuming proportions, as the ages advanced, until its mountain ranges, its elevated plains, its valleys, river bottoms, seas, lakes and rivers, were established on a stable basis. So with the other continents. Simultaneous action in the two hemispheres, Eastern and Western, developed the continents simultaneously, the greater amount of land appearing in the Eastern and in the Northern hemispheres. Forces in the Northern hemisphere are positive to those in the Southern, which accounts for the greater amount of land there than in the Southern. The Eastern is also positive to the Western hemisphere, as forces have heretofore been balanced; but changes may yet effect the oscillation of the balance until the preponderance will rest in the opposite scale. This must depend upon physical circumstances. In relation to the Northern and Southern hemispheres, a change in the balance of forces is impossible with them, from the fact, that at the period of the formation of the body, the balance was fixed by pre-existing forces, whose sway was tantamount to the fiat of fate, as regarded the arrangement of its polar forces,—positive and negative. The poles of the earth coincide with the character of electric and magnetic currents, which influenced action when it was evolved within the mother sun, and sent out to seek its orbit within the system. Equilibrium of these forces would be fatal to the development of the planet, according to the law of force stated in the former volume; while oscillation of subordinate forces, as from the eastern to the western hemisphere, or from one sec-

tion to the adjoining one, is productive of necessary developing conditions. Action and reaction of positive and negative, is thus forever the law of all development.

The Fifth Great Era was, by far, shorter than the fourth; and the sixth, than the fifth; progressing conditions being subject to stimulations by stronger forces, as types advanced, and all elements, correspondingly. The Great Eras, or grand subdivisions of time, in former cycles, were of such length as to be incomprehensible periods; and in the last, up to the closing one, were almost too vast to be measured in years to the comprehension of man in his first estate; but the present, and the preceding one, are more comprehensible as to their duration. Their epochs as revealed in the rocks are plainly marked, and the intervals between them are a tracery of circumstances of development, of such a nature as to be read by adepts in the science, and the periods can be thus measured with approximate accuracy.

The action which characterized this era, aside from that of propagating life and species, was upheavals, and such incident progress of surface conditions as established the Great Continental Plateaus on a firm basis. There was yet much to be accomplished in adding to the stability of sections lying inland and shoreward, where the incipient ridges, that were to form great ranges, were yet hardly above the ocean level, or where basins had yet to be subjected to upheaving force, to fix the stability of portions of them. The intervention of the closing age of the great era, the Cretaceous Period, checked the progress of surface conditions, and subsidences of unstable sections resulted from the waning of the energies of the planet. Yet, during this age, there was important progress on lands that had become qualified to resist the unfavorable circumstances that forced others to succumb. The lands were outgrowing the monstrous

forms that occupied them in the last age, and these were disappearing through the action of subsidences and gradual decline. A few species survived to propagate their kind into subsequent periods; but, they also declined in that age, although possessing a tenacity of life that has enabled some to survive until the present; the lands of the earth furnishing localities suited to them, and where they serve the purpose their first progenitors did in their day; viz., that of imbibing the gross elements,—the miasms of tropical swamp-lands and jungles, particularly. They serve the same purpose in higher latitudes, where they are found in less abundance and of more harmless varieties than in the warmer latitudes. Some species advanced beyond the general plane of the great type, and propagated from this elevation; their progeny taking higher rank than they, in the next great era.

The Sixth Great Era crowned Nature's work. It was an era of intense activity of vital energy; all forces of the planet participating in the energetic labor of fitting up the surface to assume the permanency necessary after the permanent orders of life should be introduced.

The periods that composed this era have been described with precision by Geologists, and the action of each delineated as far as observations have revealed it. In the next chapter will be delineated, particularly, the most marked and important activities of this Great Era, also that of the Seventh Era. It is unnecessary to prolong this chapter, to specify the progressive stages of the remaining Eras to the present, the Eighth Planetary Era, since it is the object of the next chapter to describe progressive developement through the Great Eras to the culmination reached in the later ones, the conditions of which demand particular specification.

CHAPTER VI.

PROGRESSIVE DEVELOPMENT OF PLANETARY SURFACE.

DEVELOPMENT OF SURFACE — CAUSE OF UPLIFTS — PROGRESSIVE LIFE OF GLOBE — REGULATION OF CLIMATE — GLACIAL EPOCH — EVOLUTION OF STABLE CONDITIONS AND TYPES — PREPARATION FOR MAN — LAW OF INTRODUCTION OF ERAS, TYPES, ETC. — PERIOD AND CONDITIONS OF INTRODUCTION OF MAN — PROGRESS THROUGH SEVENTH ERA TO THE PRESENT.

IN introducing this chapter, it is well to remark, that its purpose is to carry to their conclusion subjects introduced in the preceding one, but on a plan consistent with the more thorough treatment of some than was admissible in that. Surface development of the planet has already been considered until the commencement of the most active stage of the Fifth Era, with regard to illustrating the character of the successive eras; it will be necessary, however, to revert to circumstances and laws connected with the unfoldment of planetary conditions, which the successive eras, from the first, reveal. This will involve but little repetition.

The progressing cycles of ages that compose a planet's lifetime, weave into the web of that life the variety that is an essential ingredient in all life. Vicissitude is the condition of life, its necessary attribute; whether it be the life of a world, or any form thereof. Change writes itself in characters that are the impress of Law, on all things pertaining to time. Worlds evolved from the bosom of immensity are the theatres upon whose stages are acted the Laws governing in the Infinite Universe of

God; each separate world being a universe in miniature, and governed by laws as universal in their application, as is the Divine government. "Earth was without form and void;"—this first line in the planet's life-history, is rich in suggestions relative to the utility of the changes to which it has been subjected,—the plan by which order was elicited from the chaotic confusion of its primordial elements. Divinity has inscribed itself upon the laws that govern the progressive development of a planetary surface; and whoever fails to read it there, misses the significance of one of the most important lessons that can be given man to study. The swaying of time's pendulum through the eras, marks, with each vibration, a chapter of "Special Providences"; or what is the same,—of interventions of law, which serve the special purpose of bringing about necessary changes, and thus pushing on development. "No sparrow falleth to the ground without his notice;" no tide of disaster, swept over the surface, or reign of terror and confusion supervened, in the early eras, but, in its final results, bespoke wisdom, supervision. The mode by which progress has been achieved is Divine; for it never fails of its purpose. There have been no fluctuations of purpose, which imply ignorance and weakness; but firm adherence to the one plan marked out by law as the effective one. All this appears evident to the thoughtful mind conversant with the plan of Earth's developement to the present stage, as it is revealed in the ages that can be studied by man on the planet, who, with any faith in a Supervising Power in Nature, compares the evidences of Divine Supervision exhibited in his own individual life, with those revealed in the planet's life-history, as far as he can read it. The revelation of God in Nature, is apparent to even the superficial thinker, but to the profound philosopher or scientist, whose work it is to

discover and define the modes of Nature, Atheism, in its true signification, is as impossible as disbelief in law itself. Law swayed by Intelligence ;—this is the lesson inculcated by a study of the principles of development operative in the evolution of advanced planetary conditions from a world in chaos. Reverently then, as in the presence of Omnipotence, let man study the history of the home of his birth,—the planet whose life prefigures his own, being a succession of experiences, whose purpose is, to overcome all evil tendencies, and exhibit the inherent good in bold relief.

The reader who has carefully studied the preceding chapter is conversant with the mode of unfoldment of stable planetary crust, and also understands the nature of the forces involved in the process of regulating the surface structure. The continents of the present exist as monuments of the efficacy of the plan that unfolded the land through the instrumentality of the water and the forces that operate to convulse the crust. Upheavals, after sedimentary deposits and heat had formed a stable crust, instituted land surface, at first, after the waters had prevailed long enough to so fix this stability as to cause the upheaved lands to serve the purpose of nuclei to greater areas that future action should unfold. Co-operation of atmospheric with internal forces through the small tracts of exposed crust, first in existence, was necessary before the energies of planetary matter could be sufficiently aroused to cause extensive upheavals, such as would elevate continental areas. In the Third Era, as already stated, the nuclei were formed in tracts, that remained as stable surface until other upheavals exposed crust of a character better fitted to serve, in future and more advanced eras, the same purpose these had already done.

Many of these lands that once bordered the continents

in different localities have subsided, after serving the important purpose of nuclei to forces to aid in generating extensive upheavals, and thus to help in banding the new continents with ranges of mountains that were to them an indestructible framework, which could defy the destructive forces of all coming time.

The trend of mountain ranges, and the direction of uplifts, denote the direction from which the forces were propagated; as in the case of the Apalachian range of North America; the force here was propagated from the ocean on the East, or, rather, Southeast, which gave the Northeasterly and Southwesterly direction to the range. Thus say Geological works. Uplifts are the result of a complication of causes. The earth's interior is molten around a centre of solidified heated substance; central matter of the body being so susceptible to condensing force as to solidify sooner than the other matter of the body not subjected to surface influences through the crust. Within this subterranean chamber, especially in active eras, are perpetually being generated expansive forces; and these must find vent through the crust. Volcanic action and earthquakes, in the present era, are the result of these confined forces seeking and finding egress. In past ages, more than in the present, contraction of the crust from the gradual cooling, has been a powerful force to disturb it, as in early eras it was thinner and more flexible than at present. It is also a significant fact, that in early eras, when there was vastly more molten matter within the circumference of the planet than at present, and the heat of the whole body far greater than in recent eras, there was an immensely greater amount of expansive force generated within the thin crust than is possible by the modified forces of the present, which accounts for the intense activity of eruptive forces in the early eras. The co-

operation of these two forms of force will account for all the phenomena of uplifts, foldings, fractures, etc., that are not due to the tension caused by oscillations. However, it remains to state that the oscillatory movements of the crust are caused by the generation of the above mentioned interior forces in greater abundance in some localities than in others; and that land surface is an important factor in the operation; which fact has been before referred to.

Subsiding areas, having expended their vitality to a great degree, are not the strong abettors of force that are required for upheavals of the kind that occurred in the fourth and fifth eras, when the great continents were upraised. The lands whose forces were not exhausted, and hence, which were not subsiding for lack of force, that were in existence prior to the commencement of the uplifts, in the vicinity of the areas where forces were awaking to activity after an interval of rest, were the abettors of the strong forces that should upheave the wide tracts and fix their stability. In the Carboniferous Age, for instance, in the vicinity, to the eastward of the gradually uprising coal areas, and Apalachian range of the United States, there was land surface of this character; and after the extensive uplifts of the next age began, there were islands in the Atlantic Ocean not far distant from the coast, and also sections subjoined to it, which belonged to the subsiding areas, but which, having been more recent formations than the interior lands of the old continent, retained their vitality longer, and remained affixed to the uprising crust and as part of the continent, for a time, by virtue of the activity of their forces. It was after the intense activity of the early Mesozoic age had so completed the exhaustion of their vitality, that, being coast lands, they could no longer retain their places above the level of the ocean, that these

subsided; and in subsiding, they dragged partially down coast regions of the new continents. The oscillatory forces had changed their base; — that is, the generation of expansive gases was continued under the uprising area, having subsided beneath the sinking lands.

The Azoic lands of polar latitudes became stable surface in consequence of favorable position. They propagated force over the emerging continents as stable areas, that would, in return, receive as much as they had imparted, being more susceptible to the invigorating forces of the adjoining surface than the more tropical lands. They had not been exhausted by intense volcanic action continuing at intervals for vast ages, as the latter had; this being attributable to their situation outside the equatorial belt.

Within this belt, forces were positive to those of polar latitudes, from the first; as there the fiercest fires blazed, generated by the superior motion, and fed by the more appreciable solar radiation; there the atmosphere was ever operated upon by influences superior to those that could prevail in the opposite quarters of the globe; and there, surface matter soonest yielded to condensing force, and solidified. The consequence of all this was, that the earth was a form after the perfect model of Nature, whose existence is perpetuated by the means of this diversity of forces. Starting on its career as a world, under circumstances of position, motion, and form, that fixed the necessary diversity of its forces, development was the natural consequence of its existence, and by a mode determined by the laws governing matter; and by a constantly accelerated force.

External forces were positive to internal ones; and such interaction of these as resulted in the phenomena of eruptive action and upheavals where forces were strongest, were the natural consequence. Currents of

Superior force followed coast lines where the crust was thinnest and interaction most energetic; which currents were constantly strengthened by currents of high quality from surface matter; as mineral beds of different kinds, and organic matter and organic life. Electric and magnetic currents circulated in the atmosphere, flowing from pole to pole and from the equator to each pole, obedient to the principle of co-operation of positive and negative, and these were swayed by the forces that surface matter yielded in superabundance, in different localities. These currents co-operated with all surface influences and internal forces, to fix the direction of uplifts, the trend of the great mountain ranges of the globe, and the coast lines of the continents. The general direction of these has been, in all eras, northerly and southerly. What deviations from this line that exist now and have heretofore, are owing to circumstances of situation of land and mineral beds of high and low order, and the greater or less prevalence of water surface, and marine depositions of great depth, etc., etc., in the early eras, when the lands of the earth were forming; all of which causes have been determined by some precedent ones, dependent for existence upon the law of force just explained. Continents were shaped by these forces, which existed, in the nature of things, before there was land or water, or even a crust to the globe. Continents shaped atmospheric and oceanic currents, but acting in subordination to the forces that were, and ever must be, Omnipotent on the planet to shape its destinies.

Mesozoic time, which, in Geologic phrase, means the middle period of earth's Geological history, is included within the fifth great era; its closing age, the Cretacious, comprising the night of the era, or its closing period. This was a period of general subsidences, like the Sub-

Carboniferous age, the last of the fourth era. Geology confirms the theory of the subdivision of time into great eras, between which intervene periods of general subsidence of energy of the planetary forces, when it recognizes the nature of these two periods, which are sufficiently recent to be understood through their formations. There are also land-marks to point to more ancient eras and the character of the energy exerted in them, and the action which characterized them; as for instance: the evidences of disturbances which occurred some time in the Azoic age, which appear in the foldings and crystallization of beds; the accumulations of formations of vast thickness, and the evidence of the prevalence of marine life exclusively in them,— which means a period of universal rock-making of vast duration, which necessitated the prevalence of the waters, and the absence of conditions favoring the existence of terrestrial life, and indicates also the part which marine life played in rock formation, or in working over the matter of the crust, preparatory to the introduction of higher conditions of life. Later periods have left such evidences of the character of the successive great events that have marked them, as leave no room for questioning the authenticity of the previous history of the globe, which traces principles in their operation down to recent periods, where they are exemplified in the light of science by the investigations and discoveries of learned men.

The true history of the life of the globe is found recorded in the rocks; and science is reading it, and unfolding to the understanding of the present generation, the wondrous revelation, that tells more, in reality, than the expositors themselves are generally ready to admit. The fact of the succession of types and species, the gradation of animal and vegetable life, that is observed to have been the order on the earth since life was

introduced, is suggestive of the origin of species, and of life itself; questions which the revelations of geology have brought prominently before the thinking public. The true solution of these important questions is only possible by a thorough understanding of principles gleaned from a knowledge of Nature's modes, from first to last, as far as this is possible. The prominent fact of the peopling of the continents with terrestrial life, after the long exclusive occupation of the earth by marine life, occurring as a consequence of the changed conditions of the globe, leads to the conception of this truth; viz., that Conditions at the surface determine the character of the life of different ages, being instrumental in introducing it. This truth is fully illustrated by the recurring changes in terrestrial and marine conditions through the different eras. Living forms survived the successive changes of the early planetary eras in small proportion to the great multitude and variety which marked them. Periodic disturbances, local and general, which were the order through the early eras, and which preceded the institution of new and higher conditions, were of a character to be destructive to life of both kingdoms, but especially to animal life. Ocean areas were depopulated by eruptive action when the crust was thin; and after it became more capable of resisting outbreaks, sea beds were still susceptible to upheavals and changes of water level and temperature, which were disastrous to life in general. However, complete extermination of species was out of the question, considering all the circumstances favoring the preservation of remnants. "Arks of safety," Nature had provided, where the "select few" might resort,—which the "fittest" would find, through their superior instincts, and thus live to propagate life over a renovated surface. Nature was as sparing of her energies as circumstances would allow;

and hence, when life had been developed through the action of reproductive force, exerted through the inorganic kingdom, it was perpetuated by the same force operating through the superior mode the higher kingdoms unfolded. It would have been a retrogression altogether inconsistent with permanent progress, had complete destruction of life resulted from catastrophes, and so the re-establishment of it by the one possible method been made necessary. A contingency so contrary to all law and precedent, is not supposable; as it is not possible to calculate what would result from a change of the established order and relations of things.

Terrestrial life was subject to the same law as marine, in respect to catastrophes, and the preservation of remnants through the law of "natural selection." Each new modification of conditions was followed by greater variety of life; a variety that corresponded with the forces in action in the successive periods, each of which, in its institution, added to the previous sum. Types expanded with the expansion of habitable areas; and species were prolific, such as were qualified to propagate a high order of life. Destructive forces served the purpose of ridding sections of the great mass of living forms that conditions were outgrowing; thus preventing the deterioration of the prepared remnants that were to propagate in a new era, and the degradation of conditions in such era by an inferior order of life.

The sweepings and cleansings that the earth and different localities scattered over it underwent at different periods were sufficient for the purpose of thinning out old orders of life, to prepare places for new, and to rid them of foul elements, that could not be propagated into new periods, consistently with the preservation of higher conditions. Noah's Flood was thus prefigured, again and again, in the ages before man lived to exer-

cise his superior ingenuity in devising means to corrupt his race, and the earth, as well. Nature is ever potent to deal with her forces, whatever they may be; and man has to learn the lesson, that he lives to be an element of progress, if he lives through his progeny for many generations. The law that operated to destroy, for instance, the vast mass of many of the Paleozoic races at the close of that period, to make way for higher types, and to rid the elements of their degrading influence, prevails through all time; and races of men and families are as much subject to it as animal types. Progress is not to be hindered by obstacles that are in the way of every thing that is good, or that savors of human happiness; and so judgments have been pronounced by prophets against national and individual sins — such judgments as nature has recorded in the Great Book of Law.

The introduction of the successive types of life, marine and terrestrial, was through the law of evolution stated in the last chapter, and involved in all development and progress of surface conditions. Terrestrial life followed marine, and its appearance was an indication that conditions had reached a stage where progress would be rapid, and the peopling of the earth continue by a plan superior to the initiatory one. Types, families, and species, followed each other on the land, while marine life was also undergoing a transformation suited to advancing conditions. The culminating type of the organic kingdom was Man, and his evolution was the product of the activities of all the forces of all antecedent stages of action. The chapter devoted to the discussion of Life, Species, etc., will treat particularly of the law of evolution of all these. The successive great events, as introduction of new types, etc., marked epochs in the earth's history; each later recurring one denoting the rate of progress in the last. Intervening minor stages

were the milestones along the ages between the important stations where relays of forces were supplied to the progressing elements that made up the planet's multitudinous array.

These landmarks each pointed a partial halting place; as though the new, fresh start that was to be made, required rest and preparation, to provide the energy requisite to make it. And so it was, most emphatically. Nature is a stager, truly, after the type of the olden time; but latterly her rate of progress is more like railroad speed than formerly, when it was such as may be compared to that of the old fashioned coach, that lumbered along over rough highways, and halted over night at relay stations.

The peopling of the continents with terrestrial and aerial life, and the distribution over them of vegetation of corresponding orders, effected for the atmosphere and surface what marine life had for the waters; viz., their purification from the grosser elements. Air-breathing animals took the place of the opposite class, over the areas that were elevated, to carry on the process of working over the elements on a higher plane, by the superior method of imbibing directly from the atmosphere into the system, elements that were suited to them, and which needed to undergo the refining process in Nature's crucible, instead of operating through another element for the same purpose. Progress was more rapid after the atmosphere was subjected to this higher influence, becoming, in consequence, a more effective force. Terrestrial life progressed more rapidly than it was possible for marine life to do, under the more disadvantageous circumstances. Types succeeded types, with a rapidity proportioned to the progress of surroundings; and it followed as a result of the vast stimulation of progress that was effected through the changed conditions, that

the eras shortened in a proportion exceeding that of former cycles; epochs of change following each other at proportionally shorter intervals.

The successive great events tending to the regulation of the surface structure of the planet have been noted in their order up to the introduction of Mesozoic Time, the most active period of the fifth era. This period was a marked epoch in the earth's history; it being that in which terrestrial animal life began to flourish. The Great Reptilian Age made such an impress upon the earth as metamorphosed conditions completely. At its close, the face of the planet was changed in all its great features. Continents with mountain ranges and much high land, were outstretched over wide areas, where, in the last period, low-lying lands, which were oscillating areas, and waters, prevailed; the waters being in excess of the land far more than at present. Moreover, the character of the life was as greatly changed as the surface; and henceforward, there was in prospect no more such seeming retrogressions as involved the far-reaching catastrophes of continental subsidences, and overwhelming overflows by the tides of ocean, of land where order and progress had prevailed for an age or for ages. The oscillating areas were confined to coast regions and inland basins, and were of comparatively small extent.

The planet, in outgrowing the great Reptilian Type, was developing a higher stage, one whereon a higher type of life, animal and vegetable, could flourish. The Great Mammalian Type succeeded this in the next age. There was room still for representatives of many of the lower types, and there was need of them; yet, the great mass must give way before advancing conditions, and their places be filled by those fitted to the times. The revolution involved great destruction to the estab-

lished order, but it was the renovating process that preceded a reconstruction on a higher plan than the previous one. Transition periods are, necessarily, epochs of disorder, when the old is being thrust aside to give place to the new; but in Nature, what is dispensed with at such periods, is only that which cannot survive consistent with the universal good.

It was in the Sixth Era that the climate of the globe became regulated as at present, and the Fauna and Flora of the different Zones fixed. Temperature was a very important factor in the process of unfoldment of the planet's higher stages; as upon it depended the conditions necessary to the establishment of the indispensable variety essential to the permanency of the whole. Zones of life react upon each other like different types and races; the magnetic conditions created by animal and vegetable life, in different localities, being propagated broadcast in the ethers that rise and intermingle in the atmosphere, and also through oceanic currents. The currents of the air and ocean that have such an important share in the regulation of temperature of the different Zones, are thus made to act another part in the drama of progress. They bear upon their bosoms, as they circulate over the globe, elements that they distribute on the way, which vitalize the life, animal and vegetable, of the waters and the land, which prevents its deterioration. It is, in a manner, like the intermingling of the individuals of the fixed types of the different Zones,—this distribution of the etherial elements in all Zones,—the effect however, is more in consonance with the well being of all than this would be. Interaction through magnetic ethers, that tend hither and thither, wherever attractive forces call them, is the mode; not only all varieties of matter, forms, and of life, of different Zones of a planet interacting by this means, but also those of

different planets. The unity of the universe is established by this law of interaction of all worlds through the forces common to all.

While the Tertiary Period was in progress, and the great type of mammalia was advancing toward the point of culmination in the development of the highest orders of animals of this class, the earth was undergoing the final process of preparation for them. The completion of the great mountain systems of the globe; the confining of the oceanic waters into channels that must continue fixed in regard to the existing continents; the fixing of the continuity of great valleys, and lake and sea basins;—these circumstances, fixing the range and direction of atmospheric and oceanic currents, fixed the diversity of the temperature of the different zones, and established the thermal lines, if not exactly as they are at present, yet nearly so. The changes that introduced the Seventh Era modified these lines, somewhat, but not enough to change the Fauna and Flora of any extensive region.

The Tertiary Period closed by the intervention of a period of catastrophe, such as was calculated to rid the continents of the great superfluity of life this age had developed; leaving enough individuals of the necessary types to re-people the desolated lands. The Glacial Epoch, an enigma of Geology, was fruitful of the highest results to the planet. It was, emphatically, something "new under the sun." The Frost King assumed supremacy in the earth in a manner he had never before, and acted the part of devastator of vast provinces; marching his cohorts over the land, dispatching his fleets over the oceans, like a mighty conqueror, as he was.

The Glacial Epoch, as it is termed, was a long period, composed of alternating epochs of cold and graduated temperature, opposite hemispheres, alternately, being subjected to the extremes of cold which introduced glacial action on a grand scale. The causes which led to the introduction and propagation of such a series of epochs, were complicated, and can only be stated in a general manner here. In the first place, let it be remembered, that the surface of the globe had, at the opening of this period, been so far completed in its structural unfoldment that the continents had developed their functions as regulators of temperature in the different Zones, and the oceans had fixed their boundaries within certain slightly varying limits. Land extended almost from pole to pole, there being then more land in existence in polar latitudes than at present; and land and sea interchanged air currents in all latitudes as a means of propagating the temperature of the one to the other, so modifying that of both. Upheavals and corresponding subsidences were the order on a contracted scale, and operated as instituting causes of changes of temperature of sections, in eras when ultra-planetary influences were wanting to this end. A frigid temperature was fixed in the frigid zones, as at present, which might have been propagated to temperate latitudes in excess, by a combination of causes, none of which were extraneous to the planet. Extraneous causes combining with intra-planetary, would aggravate the consequences arising, to a degree commensurate with them. It was such a combination that introduced the Glacial Epoch, and extended it over many decades of centuries, as above explained. The great and lesser vibrations, affecting the obliquity of the eliptic, and the great oscillations which determined, — the one, greater excentricity of earth's orbit at certain periods, and consequently, the

greater distance of the planet from the sun at certain periods than at others; the other, variation in the distance from the sun in winter and summer of the Northern and Southern hemispheres of the planet, (this being that which causes Precession of the Equinoxes)—all these causes combined with intra-planetary to intensify effects, at epochs, separated by long periods, but which cannot be distinguished with sufficient accuracy through geologic formations, to admit of their description, or even scarcely to prove their existence. In fact, glacial action, when and where it was prevalent in greatest excess, obliterated the evidences of the changes which occurred during the great epoch, to a great extent; and it is only by the closest study of the phenomena which points to the existence of such a period in earth's history in all Zones, and combining this with facts of astronomy, that the discovery is made, that there must have been alternating periods of glacial action. However, the era was one in its influence on progressing conditions of the surface, and admits of the same general and brief notice here that others have had, and must have, in correspondence with the plan of the work.

Preceding eras had been diversified with similar changes; causes the same as were in operation in this era, had affected the temperature of the globe; first when it was in a molten state, repeatedly; and again in eras when the planet was less susceptible to climatic changes than in the Sixth Great Era, as referred to in chap. I. The ancient continents were more like the Australian continent than the present great Eastern and Western, and oceanic waters circulating around them, prevented the extension of glacial influences, as in the later era; although, the Great Fourth Era had an epoch corresponding to the sixth, after its continents had assumed their greatest size and altitude. Modifying influ-

ences prevented the propagation of glacial conditions in this remote era, beyond the cooling of the crust and atmosphere so as to admit of the introduction of the Devonian type of life. This was an effect equal in its consequences to that produced by the one under notice. Besides this, the elemental action induced by the changing temperature, set the planet ahead in its progressive career, as no other causes could. Thus are illustrated the uses of all interposed action in all eras.

Uplifts and corresponding depressions attended the introduction of the Glacial Epoch, the consequences of the natural oscillations of the crust; and these magnified the phenomena of the glaciers and icebergs, as they existed after the epoch had fully set in. When this had taken place, there were changes caused by accumulations of ice in frigid latitudes, which caused a swaying of the crust, and thus the phenomena were again magnified, and "the ball was kept rolling," which was to distribute over the continents, to the verge of the tropics, and in some eras, even in some portions of the torrid Zone, glaciers and icebergs. Opposite hemispheres at the alternating periods were exempt from the extreme of glacial action. There was compensation in this, that was preservation of types of life that could not have survived the prevalence of the same conditions at the same time in both hemispheres. The positive, the northern hemisphere, propagated its conditions, in some degree, in some epochs, into the southern; but not sufficiently to be destructive to the higher fauna and flora of the different Zones. Destruction of life was not complete in the glaciated hemisphere in any era, though it was great in every one. Some types disappeared from a hemisphere, to be replaced from the other in a favoring period, while others survived in sufficient strength to propagate themselves. The "reign

of terror" was prolific of a good that could not have been attained by any other means. Earth and atmosphere experienced a new birth by the throes Nature underwent in this travail of ages.

Glacial phenomena were introduced and propagated as follows: The extension of the continents to the northward and southward by the uplifts which accompanied the introduction of the Glacial Epoch, was attended by corresponding depressions in adjoining latitudes, where the crust was susceptible to the oscillatory forces, and where waning energy decided subsidence. As a result of this, waters accumulated in low lands of the extreme temperate latitudes, and, in coast regions, icebergs were carried by currents where they trenched upon the land, and aided in the establishment of a frigid temperature, far and wide, by their numbers and extensive distribution. This was the case in northern North America, where the great depression existed that included the great Inland Basin of the North, and that where is now situated the Basin of the St. Lawrence. Bergs derived from glaciers at the north, studded these vast areas, and were stranded in vast numbers on the southern coasts of these wide seas, causing an arctic temperature over the land and originating glaciers wherever the flow of the currents favored it, or where valleys or natural inclines started the mighty force, that in its onward march became too resistless to be checked by mountain barriers, rivers, lakes, or channels separating coast islands from the mainland. The icebergs that studded the ocean surface, and which were stranded in great numbers along the shores, added to the frigidity of the climate, and distributed glacial influences even into the torrid Zone. The mouths of great rivers became clogged with them, in some instances, thus causing overflows, and starting glaciers, which made their

way over the land as far as the temperature would allow.

The great barriers of ice that the ocean thus cast upon the shores of the continents, shut out all genial influences of the ocean breezes, standing as grim sentinels to guard the land, lest the process of renovation that was going on should be hindered. Old Ocean raved and beat in vain against the ice-bound coasts for long centuries, and still could not regain the power that had been usurped by the conqueror he had landed on the shore. The icebergs intensified the action of the glaciers, and *vice versa.* There was not in all the planet, at such periods, a force that could break the sway of the frost, or change the conditions. It was, indeed, as though chaos had come again. The unwonted action, the awful sweep of the mighty glaciers, the prevalence of storms over the glacial latitudes, all contributed to a reign of horror of a kind the continents had not before witnessed.

Evaporation must have been continuous during the Epoch, to have caused such enormous accumulations of ice. In Alpine regions snow enters largely into the constitution of glaciers, which gives them their peculiar character; and it is not possible to conceive of glacial phenomena without the continuance of snow and rainfalls, which are the product of evaporation. The moving glaciers represent the flowing streams, that are fed by the rains and melting snows; and a cessation of evaporation that would cause the springs and streams to become dry, would, as surely, dry up the source of the glacier.

Life over vast regions succumbed to the power of the elements. The flow of icy currents over mountain, plain, and valley, swept vegetation, and with it, animal life, from the surface of broad belts; and river channels

and lake beds were depopulated, in many instances. Yet there were localities, even in frigid latitudes, where some species were saved. In the beds of streams and lakes, there were recesses where life was preserved; and on land, hardy types found refuge where they could. The sections where the terrestrial types that flourish in temperate and warmer latitudes were preserved, were where volcanic action prevailed during the period, and in localities distant from glaciers and icebergs. These were numerous enough to serve the purpose of preserving remnants of types. There was room enough in streams, lakes, and oceans, where species could resort and escape all danger of extinction from the destructive conditions. Animal instincts prevented the entire destruction of numerous species scattered over devastated sections; and it is not too much to state, that the Providence that intervened to save with the Patriarch Noah and his family, individuals of the species that peopled his section, interposed in this case, to save from complete destruction, species that were needed to propagate over the renovated earth. Instincts are stimulated by special interpositions; however the idea may be scouted by disbelievers in the supernatural. The truth is, that the supernatural, which is so much discredited, is very apt to be the natural; and according to law as well established as any of the laws of Nature.

The uses the Glacial Epoch served are too apparent to be overlooked by the careful observer. This period is a striking instance of the establishment of extraordinary conditions by extraordinary means; means that were natural, following as a necessity upon certain phenomena; but, at the same time, out of the common course of events, as they had transpired upon the planet. The ends to be subserved were as important as the means were singular; and the tide of events was push-

ing on with a rapidity that required stern measures to meet them; speaking as with reference to intelligent action. The emergency was just this; a coming event must be provided for, and that within a specified interval. Now, to such as deem natural processes the sequence of laws fixed in the nature of things, and beyond the reach of interposing intelligences of any grade, this language may seem strained; and not exactly expressive of the truth. That Nature should be actually driven to the accomplishment of a certain work in a certain time, except by the coincidence of laws and processes that inevitably bring it about, is beyond belief. It is this coincidence, indeed, that must bring about every event; but coincidences can be arranged by intelligence, and events can be thus hastened; still taking place, and in better season, through the operation of natural law. This is illustrated by man's interference with Nature everywhere. Art is called in to assist Nature, wherever man's genius outstrips the slow progress of natural events. The fields produce vegetation without the plough; but this implement, in the hands of man, hastens the harvests which the cultivator has planted, instead of waiting for its production without his aid. Intelligence above the plane of earthly man, supervising in the universe, is as fertile in expedients to provide for progress as he; none can doubt this, who have faith in the existence of the Heavenly Powers; and that this should use natural law as the instrument to promote progress, to bring about necessary events in the quickest time possible to serve the best uses, is consistent with all precedent. The planet had arrived at the stage when forces were verging on to the plane where formation, as of new types of life, or new species, should cease. The formative era was near its close; its climax was immanent, when the forces of the planet

would be so regulated that permanency of the stable orders of life would be established; and henceforth, the energies of Nature would be expended for their improvement, instead of for the destruction of old orders and the introduction of new. In some sections, conditions favored the subsistence of high orders of life, in others, they did not; and there was a tendency to equalization. The equilibrium of forces throughout the continental areas of the planet could be hastened by means of the intermixture of soils and the destruction of low orders of life, and the general purification of the atmosphere and surface. The means whereby to bring about these several processes were immanent, from the natural course of progressive development; but they would but too tardily co-operate for this end without the interference of the Powers Above, which interposed by degrees, to stimulate and add intensity to the forces in action, that the end should be attained in appropriate time. It is said, that "there is a tide in the affairs of men that leads on to fortune," or, it might be said, a point upon which their destiny depends. Thus it is with a planet. The tide in the latter case turns which way God in his Omniscient Wisdom sees best for the Universe; since he rules by means of intelligent powers that can, and do, intervene in the affairs of a universe of worlds, as they do in those of a universe of men.

Winter propagated from the poles to the equator was the efficient means of renovating conditions at the surface. The freezing-out process, was necessary after the occupancy of the earth for so many ages by the crawling, hideous reptiles of the former era, and their successors of the Animal Kingdom, that were of a grade too low to conduce to pure and healthy conditions,—such as were necessary to the higher types of life that were to succeed them. It was as thorough as could be

desired; and it left wastes to be re-peopled, like the Post-Diluvian world, by the favored few that had availed themselves of the only means of salvation—the isolated "arks" of safety. The severe climate of the Glacial Epoch effected another important purpose in the economy of the planet. Prevailing for so long a period, it had the effect to harden species, and provide for the peopling of the cold latitudes, after the climate of the different Zones should become fixed. It lengthened the lease of life of numerous species or remnants of species that had become enervated, and required the stimulation of a cooler climate to promote their health. The selections that Nature then made were of the best, most assuredly, as none other could stand the test.

The glaciers, in their broad sweep over the continents, were the transporting agencies that gathered and distributed material broadcast; bearing surface matter from one locality to another, and so intermixing soil elements; like the husbandman, who enriches his fields with materials that are foreign to them, but are essential to their fertility. Seeds and roots that were sufficiently hardy to survive the ordeal, were distributed by glacial action, and thus vegetable life was propagated over desolated sections, remnants being preserved, and located by this means, in some localities.

The evidences of the tremendous force of the glaciers, that abound in the different regions where they prevailed, are startling; and would stagger belief in their real origin, were there not the strongest testimony to establish the nature and origin of the phenomena. These are exhibited in the partial denudation of mountain tops of crystalline rock, and the deposition of the latter in valleys and on plains, where these identical elements were needed to enrich the soils; in the distribution of gravel beds over the alluvial valleys; in the moraines which

left their traces on the land, and in the variety of soils the Drift deposits supplied. The use of all this is apparent. The provident Mother was providing for the future; and her far seeing wisdom provided blessing for the generations of all succeeding ages.

Subsequent to the Great Ice Age there have been periods of recurrence of some of the causes which instituted that; and such epochs have been marked by recurrence of glacial phenomena. This fact has an important bearing upon the question of the age of the human race. Since the Glacial Epoch, fiords have been excavated by glacial action; and, in some instances, river channels have been choked, and the deposits of one Drift period mingled with those of another in such a manner as to make it appear that they were the deposits of one period. Much of the Drift that has been attributed to the ancient Glacial Epoch, is of more recent origin; the remains that are found in it being sufficient evidence to establish this fact, if there were no other.

Recent discoveries have led some observers to the conclusion that man lived in the Great Ice Age and Tertiary Period. The age of the human race is a question that science must decide for itself; nevertheless, there must be data other than the mere finding of remains in strata adjudged to belong to this or that formation, to fix this age; for it is a fact well established, that there is uncertainty, in the present state of Geological science, as to the age of certain formations, or as to where, in the progressive scale of the successive ages, to place every deposition that may be discovered and examined. The geologist who dares to stake his reputation as a man of science, a keen observer of the facts revealed by his special science, upon the meagre data now to be had, and declare his belief that man lived in the Pliocene, or

any other age anterior to the Great Ice Age; or in those subsequent periods wherein the earth's surface and forms of life were becoming modified to suit the race, is more short-sighted and superficial than one should be, to say the least, who lays claims to the cognomen, scientist. The order of evolution from lower to higher, which has been traced in foregoing pages, is the lesson Geology teaches, if it teaches anything.

The fact cannot be overlooked, that adaptation of all conditions to each other, has ever been the rule on the planet — must be, in the nature of things. To suppose that man could exist prior to the orders of animal life nearest allied to him, and before the earth was prepared as a habitation for the race in which it could fix its stability without peradventure, is to believe, that in the case of the institution of the race, the order of Nature was reversed; or that no order was observed in the evolution of the crowning form. The Ice Age, taken all in all, was a barrier the human race in its infancy could never have crossed — (and, had it lived in the Tertiary, from all known precedents, it must have been in its infancy at its close). Besides, there were succeeding ages of change inconsistent with its stability, which depended upon its expansion over stable areas with regulated temperatures, and fixed Fauna and Flora, in the different Zones. Remains that bespeak the existence of the race in times anterior to the historic age, tell the tale of acclimatization of savages in far northern latitudes, it is true; but they do not repeat the story of the migrations of already hardy races to more northern latitudes than their progenitors occupied, or how the latter, by slow degrees, advanced from genial southern climes to those incongenial ones, where necessity was an impelling force to fix stability, and create the capacity to overcome obstacles of climate, sterility, etc. It is not

written in caves where calcined bones and rude implements lie intermingled, so eloquent of the past, that the cave-dwellers of the northern latitudes were not of the first people or tribes of the race, but children of tribes that had acquired stability by long experience and exercise of the human faculties — offshoots of such, that had wandered off in search of homes secure from molestation, that had sunk into a savagery below that of their ancestral tribes, and of the first ancestral types of the race. Such are the facts.

The ages have been long and many, in which man has occupied the earth; as explorations plainly reveal; yet, they do not reach beyond the limit in the past when conditions absolutely forbade his existence. It is safe to place this boundary to the age of the race, and let science fix it where it belongs in the ages; but it is never safe to be misled by facts to the sacrifice of principles as well established as that the sun sheds its light upon the earth. The fact must be misunderstood, where it is in contradiction to a well established law, as in the instance under review.

The spell of the Ice King was broken when the oscillations changed their direction. There was an era of subsidences in extreme polar and temperate latitudes; a reversion of the former action. The climate underwent a change as the causes were removed that fixed the conditions of the former age. The overflows of the ages of this period are as distinctly marked as the glacial action of the former, and in the same regions. The swaying of the pendulum does not more surely mark the fleeting moments of the day, than the vibrations of earth's crust mark the passing ages. They are, so to speak, the clockwork, designed for the purpose they serve on the dial

of time, as much as for any other of the numerous uses they serve.

The Champlain Epoch, as this is named, served to modify the climate of the earth to the very poles. There must needs be a warm age to melt the ice that had accumulated over the earth in such vast amount, and to remould species sufficiently to fit them to the warm Zones. The age favored the remodelling of the surface structure over the desolated areas, and the distribution of drift material over the lands. River channels were cleared by the prevailing waters or new channels were cut around obstructions; and valleys that had been denuded of their alluvial soil, were covered with deposits better adapted for a good soil than the former. The husbandman was distributing, in favorable localities and in available quantities, the fertilizing material that had been scattered to his hand.

This period was rich in products, animal and vegetable, suited to the advanced stage upon which the planet was entering. A Transition Epoch followed the last as an effect of the reversion of the oscillation of the crust. Every age was increasing the stability of the vibrating areas, and this age witnessed the phenomena of former ages much modified. The terraces of this Epoch mark the periodic movements of the crust, the subsidence of the waters, and the periods of intermitting action. There was a leveling, a preparatory process carried on, that fitted the lands for the occupancy of man and the higher animals, his companions. The changes that afterward occurred were not such as affected extensive areas, only in a few instances; and these were generally such fleeting changes as made small impress, comparatively, on the planet's surface.

As the Era was verging to its close, conditions on the two continents, Eastern and Western, were becoming

so regulated that Mammalian animal life reached its highest level, the plane upon which it was to exist subsequently, subject to the influences man and his superior age should exert upon it. There was yet in store for the age a change of a character to act for the evolution of Man. This was a change in vital, or magnetic conditions, such as operated for the evolution of a species superior to any in existence. Certain localities on the Eastern Continent had reached a plane of development far above the average of the two continents; no part of the Western having advanced to this plane, or within a stage of it. These areas had been exempt from disturbing action for an age, but had been recipients of the benefits arising from changing conditions in surrounding sections, and had hence, outstripped the latter in the character of their products. They were sufficiently extensive to create conditions that were exclusively their own, in that they decided the character of the vital elements pervading the districts, and lent their influence to surrounding territory, to modify and elevate conditions there. The magnetic changes that were in progress during the ages while the highest forms of the Animal Kingdom had been taking their places over the earth, and surface products were of a character corresponding to these, were particularly appreciable by these advanced localities, and it was the culmination of these changes, which wrought the wondrous work,— the evolution of the human race.

Transition in the life of the globe or of localities marked the closing epochs of great and minor eras, having been effected through modifications of all conditions, such as attended upon culmination of species and types in the organic world, and the evolution of magnetic life of higher grade. The order was as follows: Types of life culminated when the climax of conditions

that developed them was reached; which was on the eve of periods of repose of planetary forces. It was the unwonted action that culminated in the evolution of new types, which completed the exhaustion of forces of matter to the degree that rest must ensue. Evolution in every era, great or minor, reached its climax just previous to subsidence of action that marked its close. Introduction of species in a great era was by periods marked as longer or shorter by the character of the life they developed, each closing up with an interval of repose, which ushered in another active interval. A great era culminated with the culmination of its characteristic order of life; that is, when a change was immanent that would introduce another and distinct order. Types expanded through great eras by the evolution of species after species, until the changes thus wrought had begotten a greater change, which was to be effected with the birth of a type with specific characteristics different from, and essentially higher, than those of the older type. The first, or introductory species of a type, were few compared to the number developed by expansion of the type, and were sparcely distributed; and individuals of each species were few, correspondingly. Forces having reached their climax, concentred where new creations resulted after Nature's order. Subsidence of force resulting after the evolution of the initiatory forms of a new order of life, was Nature's provision for the perpetuity of this order. Having birth on the eve of the important change which introduced a new order of things, it was to be instrumental in introducing this order. It was to serve as the advance guard of approaching superior conditions, even although, through a long period of catastrophe and convulsive action, it was to be, as it were, in embryo, hidden away in recesses where it could be preserved, and

survive the mass of deteriorating life of the planet, or of sections.

Vital forces centre in life of the highest grades, at epochs of evolution; and hence, lower Nature suffers a corresponding exhaustion, which is expressed in waning of planetary forces, even while the most important activities a planet can develop at these stages, are in progress. Advancement on one plane at the expense of retrogression on another — this is the rule at these epochs. Succeeding the inactive periods are active ones, when the balance of force is reversed, in a manner. The activities of forces in the former and middle period of an active era are expended for the development of physical energies in all types of life, and in planetary matter. The culminating point is where physical forces reach their climax, and forms are developed which embody a character of force superior, physically, to the antecedent ones; and when the scale is turned, and physical Nature is on the eve of suspension of its unwonted activities, the spiritual assumes the supremacy for a season,—long enough to impart to forthcoming life, spiritual attributes of higher order than characterized the older type. *It is the spiritual which confers specific qualities—fixes the differences of forms in all kingdoms.* Magnetic forces of superior grades being evolved from physical Nature while its forces are in the ascendency, there is created a draught on spiritual Nature for a corresponding grade of forces, which being supplied, these retain the ascendency after the others have lost it; thus preventing that perfect equilibrium that would be utter stagnation. The scale is shifted again in season for the physical forces to take up the work of carrying on progressive action of surface matter and forms, preparatory to another transference of the balance of force on a higher stage of action. Thus it

appears, that inactive periods were those when physical and spiritual forces were trembling in the balance preparatory to the resumption of ascendency by the physical, and Nature was awaiting the augmentation of the latter by an addition which was to be born of rest.

From the foregoing, it will appear, that changes inaugurated in the waning periods of active eras culminated in the opening periods of the ensuing ones; the suspension of activities between the two being the natural result of existing causes, and, at the same time, necessary to the perpetuation of the new creations which were to be the characteristic life of the later era. Compensation, conditions fitted to each other, is ever the order.

The evening of the Sixth Era was closing in when the culminating point of the formative forces of the planet was reached, in the evolution of the Superior type, Man. Numerous races of animals were passing out of existence, and new types were taking their places, propagating a higher grade of magnetic elements, and thus fulfilling the conditions of the law above stated. Planetary forces were becoming quiescent, and fitted to the perpetuation of the infant types, whose infantile energies were not to be wasted in the activities an active era must generate. The new forms were to develop strength gradually, while conditions were waiting on them. At this important juncture, planetary forces had progressed beyond the point where activity could cease to such a degree as to endanger the existence of the new types, or prevent their progressing. In the localities where the human race appeared, particularly, everything was in harmony with the order of life there to be sustained. The instincts of the first men impelled them to remain in their "Eden" while the surrounding lands yielded nothing but briars and thorns, figuratively speaking.

The earth was populated over its length and breadth; and at the centres where the high species of animals originated, there was the same provision made for their preservation as for man in his domain; for they were a necessity to his existence, and to the progress of the planet. The high orders of life of every grade reacted upon other forces, and thus stimulated them to activity in the localities they inhabited; and, from thence, the stimulation was propagated, far and wide; and it was demonstrated with greater force than ever before, how magnetic life reacts upon matter for energizing it. The inactive period, or night of the era, was of short duration, comparatively, caused to be so by the extraordinary character of the new forces that were developed to co-operate with the older, which were, also, of high character.

The six days of creation of the Hebrew Scriptures were completed with the Sixth Planetary Era. A day of rest then supervened, according to the ancient seer. This day or period was the Seventh Planetary Era, the night of the first cycle of planetary eras, which is also the first period of the second cycle. This era, according to the precedent that had prevailed from eternity, was comparatively an inactive one; it was less energetic than the preceding and succeeding one. Energy had been expended in vast amount during the cycle, and there must, necessarily, be a period of quiescence, which, of course, would be of a character determined by the status of the planet. The Seventh Era was, consequently, one of tardy action. The forces of the planet exhibited the quality of energy that the evening of the Sixth Era had displayed. There were tardy oscillations, slight upheavals and subsidences, that repeated some of the phenomena of the last era on a smaller scale. There was also volcanic activity in some of the more recently ele-

vated ranges, and in ocean areas. The most energetic physical action of the era was within the area of the Pacific Ocean. Vast archipelagoes were elevated, that have since subsided in part or entirely. The amount of land in that broad section, after the upheavals, far exceeded that of the present or of the Sixth Era. There were highways from continent to continent, that the early tribes of men could, and did, traverse, through the means their simple ingenuity devised. It was as though Nature provided specially for the peopling of the Western Continent, and of the Archipelagoes, by means of the chains of islands that stretched from one to the other and thus across the Pacific, from one continent to the other. Long before the close of the Era, many of the islands, and portions of the Western Continent, possessed a population of men.

General conditions during this era, as of climate, distribution of land and water surface, vegetable and animal species, did not differ greatly from what they were during the closing ages of the last era, or from what they are in the present age. Vital conditions were, however, much lower than at present, as the tardy action of all forces attested. The closing age of the era was particularly marked in respect to the enervated condition of all forces. There was a general subsidence of energy, accompanied by such vital phenomena as were a new characteristic of a declining era; viz., the general subsidence of the human race into a state of barbarism, after having made good progress, as a whole, and in the case of some nationalities, high attainments comparatively, in civilization. Of this, more will be stated in the closing chapter of the volume. The Noachian Deluge occurred, among other phenomena of the kind, in this age; whose effects in regard to renovating the earth by sweeping from it the debased human

elements, have already been referred to. Local overflows of the kind were numerous at the same period, concerning some of which, on both continents, legends are now extant in historical records and among low tribes, whose remote ancestors witnessed the floods.

These catastrophes were the heralds of a new era, an age when Nature should put on strength, and a renovated earth should be re-peopled in its desolated sections by such remnants of tribes of men as were fit to propagate their kind, or could do so with the prospect of perpetuating the species. The Eighth Planetary Era opened before the dawn of the historic age, when the people were in a state of barbarism too low to use the means of transmitting reliable records of their times to future generations. Fabulous records of early times, before and after the Deluge, are in existence, and these are a commentary upon the state of civilization of the people. The revival of the energies of Nature was accompanied by outbursts of volcanic activity in many quarters. The active volcanoes of the globe then began to exhibit renewed energy, and many old extinct craters were re-opened. Earthquakes were common, and upheavals occurred to balance the subsidences that were in progress in some sections. The areas of subsidences were in the Pacific and Indian Oceans, chiefly. These were not all destined to be permanent subsidences, but were temporary in the case of some. There are uprising areas in these oceans, and also those which form permanent oceanic channels which cannot be upheaved consistent with the situation of the continents, and the hight of adjoining lands. There is a proportion between the depth of oceanic beds and contiguous continental lands and mountain ranges, that is preserved ; the upheavals always corresponding with the subsidences, and *vice versa*. The depth and compass of the great Pacific

corresponds to the compass of the Eastern continent and the hight of its mountains; the oscillating areas of the Pacific, corresponding to the plains and low lands of this continent. However, the channel that bounds the border of the other on the west, corresponds in depth to the hight of the ranges that stretch through the whole extent of the Western continent from its Northern extremity to its Southern, on this border. The forces that will, in the future, operate to equalize the land and water surface, will leave undisturbed oceanic channels; while vast oceanic areas that are now vibrating to the forces of the planet, will become stable land surface, with sea basins and channels interspersed properly around and over them. This is according to the law of planetary development; and it cannot be otherwise, as will appear plain to the careful reader.

Progressive development of planetary force has so qualified the law of the transfer of action from one hemisphere to another, from continental to oceanic areas, in different eras and ages, that it is hardly observable, in the present era, with reference to surface phenomena. Since the uprising of the present continents, and the fixing of the oceanic basins, the action of this law is most observable in the periodic oscillations of vibrating areas on the continents and in the oceans. The strengthening of the vital energies of sections, large or small, that result in superior surface conditions, so modify and equalize forces as to nearly obliterate the evidences of this law of Nature. It is one of those natural regulations that is modified to suit circumstances; as positives and negatives change characters sometimes, or their forces become so nearly equilibriated that they react with less energy upon each other. The necessity for the positive and negative can never cease in Nature, neither can the arrangements be other than to cause their coexistence;

yet, changes must continue that will cause equalization and trasfer of forces, and the obliteration of differences, etc., and thus it happens, that continental areas that were once positive and negative to each other are now both equally positive or equally negative, or positive in one relation and negative in another. The great differences of former periods have ceased to be necessary; as the prevalence of vital forces over the planet causes the reactions to be general, which result in universal progress.

The human race is the great force in action, that determines the changes that are now occurring and are destined to occur; and as it develops power with intelligence, it will work wonders on the planet, to make of it an Eden where all conditions shall favor the development of the Divine in humanity.

CHAPTER VII.

ORIGIN OF LIFE, SPECIES, AND MAN.

ORIGIN OF LIFE — PROCREATIVE FORCE — DEITY AND MAN — OFFICE OF MAN IN NATURE — LAW OF EVOLUTION OF SPECIES — EVOLUTION OF MAN.

THE great questions of the age are; "What is Life, and whence does it originate?" and the kindred ones; "What was the origin of the human Species, and what that of the myriad species of animals and plants that have successively appeared since the early stages of the planet's existence?" "Life is the mystery of the universe, the secret of God," it has been said; "and there is no solution of the question — what is life? since there is none to the other — what is God?" But men will investigate; and lovers of truth, having no fear of a dogmatic theology before their eyes, dare to question Nature concerning the secret of life and its development; feeling that ignorance is the mother of mystery, and that both stand accursed.

The law of evolution has been illustrated to some extent in preceding chapters of this work; but the consideration of the questions to which this chapter is devoted will require a repetition of some of the principles before stated, and a more thorough analysis of the whole subject, as it relates to Life, Species, and Man.

Life was, and is, and is to be. There is no going behind or beyond it. Force and matter — the actor and the acted upon, — there is no conception of Nature or of

God without these. Motion of different and distinct degrees has constituted the life of Nature from eternity; has originated all the phenomena of life, of suns and systems, of planets, and of all forms of planetary life. It is, in reality, all vital phenomena. Motion inherent in matter bespeaks a force inherent therein also — a propelling power. To discover this force, to identify it, is to discover the origin of life. To trace its action in the unfoldment of the universe of forms — as the perpetual promoter of progress, the fountain and the executor of law, whose end and aim are to outwork an intelligent plan, is to discover its character, — is to find the revelation of God in Nature, as the source of its life and of the phenomena of evolution.

Diversity is as much a law of matter as motion; and its influence in promoting much of the phenomena of life and motion is well understood. Indeed, it is known to lie at the foundation of life and reproduction of physical forms; co-operation of diverse elements, as positive and negative, or male and female forces, originating reproduction. Reciprocity of action between grades of matter, grades of forms, and grades of mind, is the rule; and there is no action but what is impelled by some counter action — no force exerted but what is excited by a counter force. To cite examples of the action of this law would seem altogether unnecessary, so universal and well understood is it; yet, it may be well to give some illustrations of it, for the purpose of calling the reader's attention to its importance in the solution of the problem of life.

The attractive forces of suns and systems, of primaries and satellites, reciprocate each other. Earth travels in an orbit strictly defined by the forces exerted upon its mass by the sun and sister planets; and the same is true of each planet, and the sun itself; which latter keeps

its station as the centre of its family of planets, by virtue of their combined forces linked with those of surrounding systems. Reciprocity — interchange, interaction, is thus seen to be the source of life of the systems of the universe — of all physical life. Enough has been discovered of the influence of the heavenly bodies on the meteorological phenomena of earth, to establish the principle of the interchange of magnetic forces between them. Storms, earthquakes, volcanic eruptions, droughts, magnetic disturbances, etc., are believed to coincide, and have an intimate connection, with sun-spots, comets, and other disturbances of magnetic or electric conditions of the various bodies of the system; and such disturbances occurring on one planet or on the sun, are recorded by like or similar ones on the others, according to the susceptibility of each and all to the action of the forces in operation. Interchange, according to the law of affinity of forces, is here perfectly illustrated. How much this law operates in the production of meteorological phenomena on the planet in its present stage of development, cannot be estimated in the present state of physical science; yet, it may be set down as fact, that it is incessantly operative, and ever must be, since the relation is so close between the bodies of the Solar System; the relation, indeed, being that of different organs of a form, or the members of a closely associated family. When one member suffers, all suffer with it, by the law of affinity of force, or reciprocity of action of magnetic forces, which, in the human family, is exhibited as sympathy.

In human society, the same law is illustrated. Social life is a system of reciprocation of force, of interchangability of offices such as society develops, and as are essential to its existence, and the maintenance of its individual members. Unity in diversity, is exhibited as

the law of its life, which law is as universal in its operation as life itself; — the actor and the acted upon, each an individual force, but both acting to one end, which end is only accomplished by such co-operation.

The law of life is developed by diversity; as appears from all phenomena. Motion results from diversity, the law of repulsive force ever acting to limit the power of attractive force, whether in regulating the motions of suns or atoms. Like seeks like; yet, closely allied forms, atoms, or elements, develop a repulsive force on near contact, which preserves the individuality of each intact, while the diverse forces are battling for the mastery, thus perpetuating motion, or the resultant quality of action. This law is illustrated in the motions and positions of celestial bodies, the birth of worlds, as explained in the first volume of this work; and in atomic motions of all substances — the chemical action which results in the formation of molecules, forms of matter, and compounds; also in the organic world, where it fixes the relations and interactions of organs of forms, circulating fluids, and vital forces; being, in fact, the law of their being — the actual Life-principle of every living form, as it is of all Nature itself. The moving principle in the world of mind is the diversity which causes mind to act upon mind for the prevention of universal stagnation, or complete destruction of human society; as atom upon atom, world upon world, or form upon form, in the physical universe, for the promotion and perpetuation of life; and which causes the distinct but indisolubly conjoined faculties of mind to act upon each other for the promotion of the life and health of the intellect. The forces of an individual mind may be compared in their relations and interactions to those of the physical form; the conjoined organs and fluids of the body co-operating for the perpetuation of life and

health ; and all indispensable to this end, as each is in its own specific action.

Interaction is life in body and mind, and life is dependent upon the diversity of conjoined and closely related forces or elements. This proposition is introductory to the consideration of the paramount question: What is the moving force of the material world? what the element so intimately conjoined with matter, so closely allied to it in all its grades and forms, whose diversity to it is the instigator of its life, the first initiator of motion? This interrogatory, like all others relating to natural phenomena, phenomena must answer. There is no other clue to truth besides that which Nature reveals by its methods of action presented and illustrated by phenomena. Nature has developed its representative form, one evident purpose of whose being is, to illustrate natural processes in the universal world ; concentrating in that form the elements, forces, and processes, of the latter,—refining and simplifying them without changing their true character or import, so that it shall be a microcosm in itself—an epitome, a reflection, of the universe. MAN is this form. Since philosophers began to scan Nature with a critical eye, to man has been conceded this title of honor—Nature's Representative Head. Man's physical nature represents the material universe, his inner or spiritual, the interior or spiritual forces of the universe. This must be true, if man is an epitome of the universe. His being is dual ; he is individually, a unity in duality; spiritual forces and elements being so conjoined in his form with material as to form an inseparable unity on the material plane, while they retain their distinct individuality. Nature must, in correspondence, be a unity in duality; must possess an inner life, or spiritual forces conjoined with material ones, which conjunction results in life,

and all its phenomena. Nothing can be plainer. It remains, then, to trace in man the forces that generate and perpetuate life, and, withal, to link him to the great universe of which he is a part.

Gradation of elements and forces, is at once perceived to be the order of the human constitution, the mode through which its forces act in the generation of vital phenomena. There is the physical frame with its envelopment of tissue, the blood, the nerves, the brain; then there are the vital fluids,—the nervous force, the magnetic ether that connects the physical with the spiritual part, then the intelligent mind, and the Deific spirit that vitalizes it and the whole being. The Spirit of Man sits enthroned in the inner temple of his being, as the King—the governing power of the whole domain. Its prerogative is to command, while it is that of all the inferior forces to do its behests. This is strictly true, and in a more unlimited sense than has been generally conceived. Intelligence is the superior force, and it actually uses all the inferior forces of the being as its servants. It acts on physical Nature outside the form through the intermediate forces the form develops, and in no other way. The will, at its bidding, moves the mind, and physical forces, and all together, act like a compound lever reaching, it may be, far out into the outside world, or concentrating power on the physical structure, for serving the various purposes of its life. Flesh and bones are not more really forces that can act upon substance than are intelligence and will, the forces that impel them to action. The inferior are the forces appreciable to the physical senses, to which they are directly related, as gross matter; while the superior are magnetic, and inappreciable to the physical senses, save in their effects. Thus, it is plain that there is co-operation between the higher and lower, or the spiritual and

physical forces of man, for carrying on the processes of life; but how far this co-operation extends, whether it underlies all the vital phenomena of the form, is the question.

The Instinctive forces of man — the motive power of the system, as they have been termed, — are directly related to intelligence, and are subject to it through the will. The appetites, the passions, all the physical propensities, are stimulated by the action of the intelligence or mind; thought, imagination, being the power that fans their slumbering fires into flame, or shames them into quietude when they would overstep the bounds of necessary gratification. Even the involuntary forces of the body are under the control of the will; and man can, by the force of mind, stimulate health or disease of the body; can accelerate the flow of the blood, quiet the pulsations of the heart, soothe the excited brain and nervous system; or he can induce stagnation in his system, excite hysteria, heart disease, and other maladies. His mind affects his bodily health, and *vice versa* — the bodily health affects the mind, whether he will or not; and nothing is more common among diseased humanity than cases of hypocondria, hysteria, lassitude, or peculiar sensitiveness of mind, etc., all directly traceable to the intimate relation, and the interaction, of the forces of mind and body. Mind attracts or repels disease. Contagious diseases and others do not always come as fortuitous dispensations, or as the necessary consequence of exposure; but are often attracted to a body made susceptible to their influence by the mind. The imagination, so real a thing it is, reaches out to the diseased magnetism in its vicinity, and draws it to the body, which is thus infected. It is, in such cases, interaction of the magnetism of mind with that of Nature outside of the form. This subtle

element of the human constitution cannot be confined within the bounds of its fleshly tabernacle, but it ranges abroad as it lists, when unrestrained by a cultivated will, and often works fatal mischief by trenching on forbidden ground.

This is no imaginary, baseless theory; stern facts point to it as truth; and it goes to prove more than the doctors generally admit; viz., THAT MIND IS THE MOVING POWER OF NATURE. The phenomena of reflex action of the nervous centres, the brain particularly, are evidence of the fact — a most important one in this discussion — that the mind acts mechanically with, and upon, the other forces of the body. The human system is a machine constructed upon the same principle as any other machine; that is, it is a system of forces reciprocally dependent; and whatever excites motion or action of any part, draws upon the power at the fountain head, and tends to promote action of the whole. Habit is a force which impels reflex action, unconscious cerebration. The machine habituates itself to the action prompted by the natural impulses of the constitution, and it moves in the grooves of the natural requirements of the whole system, unconsciously when thought does not act to stimulate to motion. By this means life is perpetuated. Unconsciously the will consents to what the being requires for the maintenance of its life; or, rather, it is held in abeyance while the spirit furnishes the power to keep the wheels of life in motion, obedient to the attractive forces of the system, coming into use as the power that applies force to any particular point, or for any specified purpose, or as Regulator of the forces of the system.

The imagination carries the will captive, where it is not under the control of the intellect, and thought or desire prompts to excesses, which are committed by the

passive or unconscious consent of the mind. Strong will-power persistently exercised, is necessary to keep strong passions and animal desires under control; but some persons are so constituted that these cannot be controlled until a vital change has been effected in them. The lower propensities are stronger than the reason, and they subject the whole being to their rule; the will being made the slave of passion. When strong animal propensities get control of the man, destruction is as sure to ensue as when the engineer is cast from the locomotive and it is left to pursue its mad career, crushing whatever comes in its way and destroying itself.

The reproductive function is often exercised unconsciously, according to the principles above enunciated. The body subjects the will in such cases; or the mind and will being in abeyance, as in sleep, or unconsciousness induced from any cause, the instincts have the ascendancy. Medical science has speculated on this subject, and adverse opinions have, from time to time, held the ascendancy among the medical fraternity. Indisputable facts point to the truth of the principle just stated, and vindicate the virtue of many victims of man's brutality, who, through force, or by means of induced unconsciousness, have been compelled to the exercise of the procreative function.

Many and various are the ways in which phenomena illustrate the modes of action of the mind with the inferior forces of the being, but none can be traced to disprove the truth, that interaction is perpetual between them, and that it underlies all life of the being. There are phenomena which point to the truth, that man is a trinity in unity, and a duality in unity; and that the spirit does not, necessarily, always act through the physical form, its outer part, on the material plane. Spirit, soul, and body, a trinity, man must always be,

to perpetuate the mode of action which is his life. Spirit and matter interacting as the mode of this life, constitutes his duality. In the phenomena of dreams and trance and the double, the spirit acts, in a manner, independent of the outer form. In the former, the body is at rest while the mind is in action, which action presupposes an activity of brain not consonant with the law of action of the physical brain when the body sleeps. Sleep signifies rest — inactivity of the functions of the physical brain; therefore, activity of intellect, while the physical brain is in passive rest, implies the existence of a spiritual brain, the counterpart of the former; and, as a necessary consequence, a spiritual body to support this brain. Alexander Bain speaks of a "mind body," (see Conservation of Energy by Balfour Stewart, p. 213,) which is, evidently, in his opinion, and correctly, forces subject to mind, that correspond to the finer graded forces of the body, whose action upon the mentality suggests a corresponding grade of mental forces, whose office is to transmit action to the mind proper. It is just reasoning to maintain, as this philosopher does, in effect, that intellect cannot act directly on the bodily forces, but must act through a "mind body" upon the nervous fluids, in producing physical phenomena. Through graded forces, always, spirit acts upon matter. The spiritual body is so nearly allied to physical magnetic elements, that some of these inhere in its substance, causing it to be a reacting force with the interior spirit. This decides the eternity of man's existence, as the material can never be so completely dissevered from the spiritual that action shall cease between the intelligence and the outer part of man. This particular principle, so important to be understood in connection with the whole subject of the present chapter, will be again referred to. It appears,

therefore, that in dreams and trance the mind acts legitimately, or after its one mode of action; the physical body being, in a manner, in abeyance while the spiritual body assumes its functions, in part, and reacts upon the spiritual brain; carrying on the phenomena of mental activity. The mind sometimes appears to surpass itself in seasons of unconscious cerebration. It soars above its routine mode of thought, occasionally, and enters fields of investigation beyond the reach of its normal powers. This is because it is, for the moment, partially released from the bonds of the physical, which, too often, is grossness itself, and its powers expand to grasp principles above its comprehension in the normal state. It views the fields of Nature with the comprehensive vision of the spiritual; and when, as is nearly always the case, disembodied intelligences stimulate the spiritual powers on the auspicious occasions when the right conditions exist, the dreamer becomes a Seer, a prophet, a clairvoyant, or a mind-reader.

Somnambulism illustrates the action of the spiritual body and brain upon, and through, the physical body. In the somnambulic condition the physical brain is in such a state of passivity as to be an entirely unconscious instrument in impelling the motions of the body. In this state, an individual displays acute perceptions, accomplishing feats, with the physical senses completely benumbed by sleep, impossible to him in his waking hours; feats requiring acute power of vision, accurate judgment in calculating distances, caution and agility excelling the power of most people to exercise in the normal state, and such reason, facility, and rapidity of thought and action, as the greatest emergencies can scarcely call forth from the most self-possessed, self-reliant, and active minds. This phenomenon, so common, and so puzzling to materialists, is inexplicable on

any other theory than the one here set forth; which is the Spiritual Philosophy.

The experiments and discoveries of Mesmer and his co-laborers were the entering wedge which cleft the old philosophical and theological theories of the schools and churchmen, and cast new light upon Nature and man; bringing gradually into view the principles that decide, beyond a peradventure, the duality of Nature, and man; the existence of spirit, its relation to matter, and man's relations to the world of spirit. A clew to the phenomena of somnambulism, trance, clairvoyance, apparitions, etc., having been discovered, the world had entered upon a new stage; thought upon these and kindred subjects was stimulated, and a new Philosophy of Life resulted. The mode itself, by which this philosophy was embodied in language and introduced to the world, was its potent illustration.

The Seer, Andrew Jackson Davis, illustrated, in himself, all the phenomena above named; and, aside from the written volumes he has given the world on the principles involved, is himself the best exponent of the truth of his philosophy that could be afforded. Others, like him, clairvoyant and subject to trance and the superior condition, wherein the physical nature becomes subjected to the spiritual, are continually exhibiting to the world principles that are calling loudly for consideration and exposition by the leaders in the world of mind. Spirit, diffusive as life itself, itself the fountain of intelligence, from its own peculiar plane of mind, the sphere of thought above that occupied by physical man, reveals itself to the lower plane of mind, scatters thought as the rain from heaven, to fructify thought, strews germs of living truth broadcast over the mental world, which, springing into vigorous life in soil prepared for them, a rich harvest is in preparation.

Reaction of spheres of thought on spiritual planes above the reach of material man's conceptions, with each other, and with thought on the material plane, is as much the law and method of Nature as reaction between spheres of thought or grades of mind on the material plane. This is according to the law of all life, and is manifested as true by phenomena as persistent as the life of the race of man on earth; being an attendant on the race from its infancy, and exhibited in superabundance at the present day. Reactions of plane with plane, sphere with sphere, of the spiritual universe, and these with the material universe; thought, mind, and Superior Spirit, interacting with all on and between every plane, thus conjoining spirit with material substance, and making Intelligence the moving principle of the universe, in every sense;—this is the lesson the present age is learning.

Spirit, then, is the great Positive Force of the universe, acting and reacting upon material Nature as its negative, the resultant action being life of every grade, upon every plane of existence, in every sphere, material and spiritual. The conjoining of spheres material and spiritual, and the interblending of elements of the positive and negative spheres of the universe, is the mode by which, alone, life is possible throughout Nature. By this law of action is the Supreme Intelligence made the Central Force of the universe. By this mode is power propagated from this Central Source to the extreme boundaries where physical elements, in the grossest possible form, are repellent to refinement. In the first Volume of this work, the law of interblending of spheres of attractive force and influence, in the physical universe, was fully explained; and reference made to the law of evolution of Spiritual planes and spheres.

The careful reader, by studying the principles there enunciated, will be better qualified to understand what is to follow in the present connection, in explanation of the law and method of all life, material and spiritual. This chapter being particulary devoted to the subject of Evolution of life and forms, an analysis of Spirit, and its mode of operation with, and upon, physical Nature is necessary; however, the subject matter of this chapter will not trench on the volume devoted to the discussion of spirit distinct from matter, and Spiritual spheres, planes, etc.

The conjoining of elements positive and negative, to act and react upon each other, the positive being the dominant force, is fully illustrated in man's constitution. The Duality of man is the Duality of Nature; the Trinity of man is the Trinity of Nature. The material structure of man — body and brain — is a type of that of the universe; and the spiritual body and brain with its innermost intelligent spirit, typify the spiritual universe with its innermost Intelligent Spirit. The interblending and interactions of spirit and body in man, are in exact correspondence with the relations and reciprocity of action of these distinct forces in Nature outside of man; while the method of action of these conjoined forces, which is the same in man, in all lower forms, and matter, and in all Nature as a whole, is the Trinity of God. Body, Soul, and Spirit,— this expresses the Trinity which is Nature's whole, including the Supreme Intelligent Head, whose prerogative is to rule therein. Physical elements and forces, the body of Nature, clothe the Spiritual magnetic elements, which are sufficiently allied to material magnetic elements with which they are interblended to interact freely with them. These, coexistent with matter wherever it is, form a Soul, or Spiritual Body, the exact counterpart in

form of material Nature. The Intelligence of the universe, the principle that moves upon the "mind body" or Soul — the spiritual principle nearest allied to matter — and through it upon material Nature, to promote life and development, is the Spirit — the interior and Superior Principle in this Trinity. These terms, Soul, and Spirit, as here applied, the former to the Spiritual Body, and the latter to the Diviner Principle within, are arbitrarily used, they being interchangeable terms. However, to the writer they express, as so defined, the true idea intended to be conveyed, which is a sufficient reason for their being so used. Spirit, the essence of substance; God, the Great indwelling Spirit; Soul, the vital principle pervading forms and all nature, the element that links body with mind; this is the sense in which these terms are here used in discussing the science of life.

The correspondence between Nature, as a whole, in the correlation of its forces and the interdependence of its elements and forms, and man, the correlation of his physical, vital, and mental forces, and the interdependence of all the elements and forces of his being, is perfect. In truth, the same elements and forces are involved in one case as in the other; the same ends are served in both cases. Intelligence is the fountain of force, and it can only act through allied elements, such as are exemplified in man's structure. The brain and nervous fluids in man, are like the fluids and life centres of other forms; and inorganic matter is living substance, by virtue of the magnetic and electric elements that vitalize it, and which are the attributes that actuate it to formation and all development; which elements are of the character of the circulating medium of life in organic forms.

Confusion of terms is productive of misunderstanding

of principles involved in their use; therefore, it is appropriate here to state that the terms, Magnetic force, and Magnetic elements, as used here, are applied to the finer forces and elements of material substance and to spirit, in contradistinction from the grosser material forces and substance. These forces and elements are magnetic, in the sense of the following definition of Magnetism, given by Webster: "The agent or force in Nature which gives rise to the phenomena of attraction."

The attractive forces of matter are embodied in the circulating vital fluids of all forms and substance. The nervous fluids of the human form, vitalizing as they do the entire structure, embody the spiritual element of a grade corresponding to that whose function is to cooperate with the physical magnetic force in lower Nature for the promotion of all vital processes. Here is the basis of life. "The loves and the hatred of atoms," it is that impels molecular action. Atomic and molecular motion is the basis of all motion, all life. The molecule of spirit that reacts with matter is a nucleated sphere, as was related in a former chapter, of the force engermed in cells. The central force of this molecule is the atom of Deific Spirit that is Force itself, without which in some proportion, action or life is not. The molecule, spiritual and material, like the cell, typifies form of every variety; from the universe, whose central force is Deity, to the minutest form or agglomeration of molecules having centralized force. Polarity is an attribute of molecules and atoms, as it is of worlds; the law of all action, all motion, being dependent upon the interaction of the positive and negative principles which compose Deific Life. The ultimate Deific Atom, the life-principle of any atom, molecule, or form, has polarity, which it propagates outwardly. The Deific Prin-

ciple itself is atomic force interacting perpetually, and propagating action outwardly, upon the principle of the Positive and Negative—Male and Female. Thus is universal action upon the same principle; and thus do the sexes in the Human Kingdom embody the Deific Principle to perfection; as will appear further on.

Molecules of spirit centralize material molecules, after the order of cell-life; and associated molecules of matter attract and repel as permeated by the force which is spirit itself. Atoms of spirit;—who has measured the tenuity of this substance, or found the ultimate atom? Deity alone. Therefore, it is sufficient here to state that atoms react among themselves like molecules, being, in reality, as far as they have been investigated, molecules. This is true of spiritual as well as material atoms. Hence, forces are measured by the strength of the atomic force exerted from the Central Spirit Atom, or the strength of the Deific force there concentrated. Atoms of atoms, of this Force to infinity, is the measure of it exercised within molecules of matter undergoing the process of being built up into forms—condensing into elemental, mineral, and organic substance; *and yet the Deific Life is there, located within the molecules*, as certainly as the Holy of Holies was within the sanctuary of the inner temple, prefiguring the fixed dwelling place of Infinite Spirit within the Universe, its Grand Temple.

Life-centres embody this Principle in stronger force; that is, it is less attenuated within the cells there accumulated, and its sphere of force is of such strength as to create reactions of the proper quality to stimulate similar force throughout the system; as all inferior forces are stimulated from the Deific Sphere. Centres of different grades within the animal or human form, react with each other, all inferior ones dependent upon the brain,

the superior centre, for stimulation of their forces, as the life force of the various organs are dependent upon them. So it appears, that every grade of form images, in a degree, the Deific, as every grade of force is vitalized by the Deific. The "Human Form Divine" it is, however, that images this to perfection, because its functions are Deific, made so by the quality of its forces. These forces are Deific, as being derived from germinal essences of the Deific Body and Mind or Intelligence, which is the Superior Deific Force. The Sphere of Deity, the Plane where dwells the Perfected Grade of Mind, is permeated with Deific life, and atoms of force from all varieties of substance and life on that plane, are propagated throughout the universe as life-germs, attenuated to infinity in physical Nature. The Deific Mind and Bodily Force is propagated directly from the Deific Brain, and related Centres, through grades of intelligences who embody this force in proportion to their grade. Down through the spheres of life from the Highest, to the physical universe, where man is born in the "image of God," is this Superior Force propagated direct, and every immortal germ is endowed with Deific Attributes in germ, because within its brain and bodily centres are incarnated atoms of this Superior force, that is Intelligence itself and vital force allied to this, as the nervous fluids throughout the human body are related to the brain; thus it embodies the possibility of outworking an intelligent mind and bodily structure after the pattern of Deity. *Mind essence propagated direct from Deity*, is the germinal spark that centres the human being, and stimulates all its bodily centres; and hence, this is the typical form,—the embodied Deific Force, whose office in Nature is ever representative of that of Deity, as its forces are developed to act.

In treating of cellular life, it was stated how the im-

press of the sphere was made upon the first organic form or cell. It will appear from what was stated above of the origin of the forces that centre all forms of life below the human, how all forms in the Supernal Spheres of life impressed themselves upon physical elements aggregating by the law of formation, dimly at first, but plainer and plainer still, as progress proceeded, and matter was subjected to the perfect law, by being raised to the highest stage the physical develops. Spirit impressed itself still upon the successive forms of the physical world, as the spirit-force concerned in the evolution of the first cell-life, had done. Variety in the material world represented the variety in the Superior Spheres of life, and evolving forms embodied the ideas pictured in perfected forms, as nearly as possible considering the tardiness with which all matter in this lower stage obeyed the attractive forces of spirit.

The sphere of Spirit is coextensive with that of matter, and hence, force is propagated throughout the universe, and matter is ever subject to the degree of force it can appreciate. Like seeks its like; forces centralize where their attractions call them. This signifies that matter in its chaotic and elemental state is permeated with a force allied to the Deific, which causes it to be susceptible to the operation of etherial currents, as described, causes the tendency of such currents generated on spiritual planes, to be towards matter where formation is imminent. The tendency to obey the force of gravity is inherent in all matter; so spirit is inherent in all matter; that is, permeates it, links it to developing forces.

The law of life is embodied in physical systems of worlds, where centres of force govern, by the law just explained. Spirit forever has the supremacy, being embodied in the attraction of gravitation, and every other

form of force physical matter develops. Material Magnetic forces embody spirit, their quality of superiority being derived from their spirituality — their density as forces pregnant with spirit. This makes them peculiarly attractive to spirit, with which they co-operate for creating germinal life, and for carrying on the functions of life within forms. The vital fluids are magnetic, and hence, are the vehicles of spirit within organized forms. The repulsions of spirit and matter are propagated throughout forms in the fluids that centralize spirit, and by this are the vital processes perpetuated.

Spheres of repulsive force are developed wherever action is instituted by the universal plan, in correspondence to the sphere of repulsion Deity develops by perpetual interaction with the outer universe, which preserves the Deific Forces from contamination by inferior force, through the perpetual rounds of an eternal existence. This principle is illustrated in systems of worlds, where each form takes the place determined by the quality of its forces — its likeness and unlikeness to the central body. Illustration of it is to be found everywhere in Nature, in the manner of association and location of forms and forces. Thus it appears that attractive and repulsive forces balance each other, and so preserve the equilibrium of Nature.

Forces centralize, as it appears, on the material plane, on the verge of Spirit, in the Magnetic Forces, that may be termed the Great Central Force of the Material Universe, whose local centres are distributed throughout space to infinity. Across the line that divides the two planes reactions are propagated that preserve the vitality of the universe, — prevent universal stagnation. Inertia opposes itself to Force across this line; and Force opposes itself to Inertia. Matter is Inertia. Spirit is

Force. The one is not without the other. Matter is inconceivable without Force actuating it; and Force is equally inconceivable separate from matter. The actor and the acted upon, are requisite to keep in operation the law of life the universe unfolds.

Deific Mind distributes Force directly throughout the Sphere which is its immediate dwelling place, thereby impelling action and conferring attributes upon matter through the agency of the forces of that Sphere, that in their escense are like those of mind. Thus forms grow up under the action of the vital forces after a specific plan, that is as fixed and unvarying under the same circumstances, as the law of life itself. Thus is universal action exhibited as Intelligent action,—action to an end, and by a plan as far reaching as Deity. To illustrate: The force of gravity is the exhibition through physical substance of the attractive force of mind, which is love. The arms of Everlasting Love, an attribute of Deity, are forever extended through the empire of the Omnipresent, and grasp the physical universe in a deathless embrace, through the law of gravity. Forever tending towards centres where the forces of spirit are strongest, matter is brought under the more direct sway of spirit the stronger the attractive forces become. The loves of the atoms exhibited in chemical affinities, culminate in chemical unions which result in the birth of forces. The immutability of forces and law, in the material world, and the universal adaptation of laws to each other, of means to ends, and the harmony of physical creation, are the Power and Wisdom, Justice and Harmony, of the Perfect Mind, displayed on the face of material Nature. The laws of matter are as fixed as the laws of mind, and are fixed by them; since mind is indestructable, and permeates matter as the force that moves it to action. The organs of the human

body, for instance, are the instruments of the mind, in the sense that they serve the purpose of perpetuating its life, and are subject to its dictation. Mind itself permeates these organs as instinctive force in atomic proportions just suited to their separate functions, thus individualizing, or conferring the distinct functions of each. This is evident from the law of mechanics, that decides that the propelling power of a machine must be applied to every part and in such proportion to each separate part as will serve the function of that part. The machinery of the universe, of the human form and of every other form, is run by the same plan. A law of mechanics is as fixed as God himself, in the universe; and as well might a steam engine be propelled without the application of power generated by the steam to its several parts, as the order of Nature be maintained without the proportioning of the original force to fit the functions of all atoms, elements, and forms, that go to compose it.

Thus are laws derived from Deity; thus is each law of matter, each distinct element, form and force, invested with its distinct and never failing function in the universe of matter. It is conceivable that the universe of matter, the body of Deity, as man's physical form is the vehicle of manifestation of his intelligent spirit, is, from eternity, invested with the characteristics of a body; that is, possesses the diverse qualities of matter necessary to all the functions of the form; which qualities answer to the diverse qualities of substance in the human body, or to the combinations of elements forming this substance and the different organs of the form. From eternity, the Ineffable Divine Spirit existed, as the Source of life and motion, and in a body through which it expressed itself, as in the present order of Nature. There were the incipient elements known as the bases of

all matter, in the universe of primeval matter, when the only order expressing any relationship of atoms, was position of masses of atoms or strata of atoms with regard to each other. The functions of the universal form were suspended in complete rest, and decomposition was doing its work of creating stimulus for it; yet, the organs, or elements, in repose were elements still, awaiting the action of legitimate forces to evolve them in perfect form. The laws of matter are forces acting after an intelligent manner, or as if created and impelled to action by an Intelligent force; and by a strict analysis of this force, from all the data accessible, it appears, as above stated, that the universe is subject to the rule of Mind through organs, channels of force, or qualities of matter, eternally charged from that centre for the purposes of its life. Coexistent, coeternal, mind and matter — Spirit, or Force, and matter, immutable law governing all the processes of life, according to the fixed law of life of the universal form; by this order, it appears, is Nature on its present plan possible, and by no other.

The question here arises, what is accomplished by the process of development to which the universe is subjected during an eternity of action? or, what is the object of action? Development is for the evolution of the forces of matter; or, what is the same, is for the evolution of the forces of Spirit. The round of life which constitutes the "eternal years of God," or, speaking as properly, of the universe, as manifested by phenomena, consists of series of periods of rest and action; the character of which has been often referred to in this work. The eternities, cycles, and compound cycles of eternal periods, described are Vol. I, are these alternating periods; each of which is plainly marked by the labor accomplished in it. Alternation of rest and

action is a necessity with the spiritual, as well as with the material universe. God and Nature rested on the "seventh day," according to the Seer. Together they rested; that is, the forces of spirit with those of matter, needed the invigoration imparted by rest, since the two had co-operated in creative labor. However, the activities of spirit do not wane like those of matter, and hence, the inactive periods, those wherein the material universe is in chaos, are periods of a certain grade of activity on the spiritual plane. Action there is confined more to the development of that plane, the elimination of its forces, than during the active eras, when it is concentred more upon the material plane. Energetic action evolves spiritual planes, and forms to clothe and people them; and on the spiritual plane it alternates with a more feeble action; and this latter alternates with rest, or, a greater or less degree of inactivity on the material plane. The character of this low grade of action is just fitted to the demands of Nature during the long interval of repose of forces, when what is needed is the arrangement of spheres of force where they will coincide with material centres where action must soonest awake, by the law governing. This will appear plainer in the chapter treating of Spiritual Spheres, etc., where the mode of action will be more fully revealed. The highest purpose subserved by action of universal forces, is the evolution and perfecting of individualized spirits. Man is the ultimate of Nature's work; all progress tending toward the incarnation of mind and the development of intelligence, in all worlds. Man is the force in spiritual spheres, that works for the evolution of force, in all periods. His home in the spheres is what he makes it, subject to the law of spirit. It is his to actuate force by the one method in Nature, in spirit spheres to the highest — by bringing matter to bear upon

spirit as an actuating force, in a manner, as spirit is brought to bear upon matter as the actuating force in the material world.

And here is revealed a principle not heretofore brought prominently into view, but hinted at; viz., *That matter inheres with spirit on every plane of the spiritual universe, as spirit inheres with matter on every plane of the material universe.* This is the principle that underlies all life of every plane — the two forces inseparable and forever interacting. Germs of spirit, the starting point of physical life; atomic matter, as it were clinging to the outskirts of spiritual forms and substance of spiritual spheres as the grossest element thereof — this is the mode. It is, in the latter case, refinement seeking to repel grossness, that is the initiating principle of life — the conflict of the atoms, which is propagated from the centres of life where the grosser element is rarest, but where the repellent power of spirit is greatest; it being there the most refined. Like seeks its like, and matter and spirit of corresponding grades and qualities will cling together, cemented by cohesive force, but yet kept asunder as atoms and molecules by the repulsive force of spirit. To the very Brain of the universe, the "Holy of Holies," where Supreme Intelligence expresses itself, atoms of matter cling, as a lover to its mate, by the power of attractive force of Spirit which is forever calling matter upward; and throughout the upward journey it is a continuous conflict, victory and defeat forever fluctuating in the balance, and throngs of retreating fugitives lingering all the way down the plane to the physical state, their home kingdom; while undaunted cohorts still press on with ever diminishing numbers, until the conflict rages around the Citadel of Life. Superior to its subject, the Positive Mind repels the aggressor, and repels forever. THIS CONFLICT IS

LIFE. The Inaccessible Spirit of Truth, of Power, of Wisdom, of Love, of Justice, of Harmony; the God enthroned in Nature, is associated with it thus, as the Force diverse from matter, and repellent to it in near association, and propagating like force from itself through all grades of spirit, to thus react with all grades of material substance.

As vehicles of the material, the opposing force, all grades of spirit below the Supreme Mind, are repellent to the latter, in a degree, and thus it is forever separate as a force from every inferior force of mind, inferior spirit or matter. This suffices to show the law of propagation of force and life of all grades, from the Central Force of Nature.

But, to return to the subject of interaction between the two planes. Spirit, cohesive with matter on the plane of the latter, as matter with spirit on the plane of the former, is forever the rule. During periods of rest of matter, when spirit forces are withdrawn from the work of evolution, force is latent within it; elements retain their hold upon life, though the vital fluids are so rarely diffused as to cease to supply germs of life, or centres where forces can be generated, to institute and carry on the work of formation. On the Superior plane forces are gathering themselves up for renewed activity on the inferior plane; and when the period of revival comes, which is, when decomposition and degradation of matter has reached the point where every separate atom, molecule, or element, as the case may be, of a certain grade, can be individually stimulated by an influx of the superior element, then this stimulation occurs, of necessity. It is a principle of physiology, that vital force is born of decomposition. In building up vegetable and animal tissues, the forces set free by decomposition are speedily transformed into nascent

affinities, these generating vital force; and atoms in the nascent state, that is, just set free from combination by decomposition, rush into new combinations, their affinities having been strengthened by an added force. The vitalizing process of a universe sinking into chaos preparatory to arising into renewed life, is the same as that of perpetuating the life of organized forms. Force set free by decomposition, to be used in action, and this process perpetuated eternally, is universal life; perpetuated for the purpose of maintaining material life of forms, it is Nature's process revealed in clear light, that "he that runs may read" the life history of the universe.

Spheres of attractive influence of spirit are diffused through infinite space during periods of rest of matter, vitalizing the latter too feebly for the purposes of formation. When spirit itself becomes re-energized by the process to which it has been subjected, it widens its spheres of attractive force; that is, from the centres of life, the spheres where the immortals dwell, streams of magnetic force disseminate themselves, stimulating the feeble attractions of spirit upon matter, and thus instituting the germination of centres where force is slumbering, awaiting the spark of life that shall release it from inactivity. The process of institution of action, at such epochs, and all epochs of revival of force for world making, has been minutely detailed in the former volume of this work, and here it only remains to describe how spirit is evolved in elements and forms to co-operate with matter on the lower plane, and for the purpose of translation to the higher, the spiritual plane.

"And God said, Let there be light; and there was light. * * * And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yield-

ing fruit after his kind, whose seed is in itself, upon the earth; and it was so. * * * And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven. * * * And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind; and it was so. * * * And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in his own image, in the image of God created he him; male and female created he them. And God blessed them, and God said unto them, Be fruitful and multiply and replenish the earth, and subdue it: and have dominion," etc. * * * "And God saw every thing that he had made; and behold, it was very good."

Creative energy propagated from centres at periods, as above stated, diffuses itself throughout Nature, and action of a grade to introduce aggregation and formation ensues. Elemental action culminates in formation, and formation culminates in the superior type of form, man. The diffused spiritual element, being, as just explained, of every quality and grade to suit every quality and grade of matter, supplies germs of life for every possible form of substance, and for every type of form. Force is born, and in due time, of every requisite quality, for re-investing physical Nature with all the functions of active life. The spiritual universe begins to yield in profusion elemental substance, when this activity becomes general. Germinal escenses of every grade inhering with physical magnetic elements, that, by the reviving attractive forces of matter, are gravi-

tating to the various physical planes from where they have been lingering for lack of sufficient strength of physical forces to draw them away, are pressing to the work of evolving form anew on this lower plane. The labor that is to be done, is to use elemental substance in evolving form. On the lower plane, all substance is, at such an epoch, elemental; and the work of an eternity of action, is to evolve from it and its associated spirit, a universe of forms, an infinite variety of life and force; for the ultimate purpose of re-establishing lower planes of spirit existence and clothing and peopling them with the varieties of life that naturally gravitate to them from the material plane.

The physical world is the cradle of form. Material substance is the matrix where the force is conceived, that, when born into active existence, can withdraw itself from the attractions of the material world sufficiently to maintain an existence on a distinct plane. Formation develops the forces of spirit on the lower plane by accumulating spiritual elements around centres, and fixing the stability of masses of these by cementing them together by the plan of concentration through chemical combination and organization. CONCENTRATION OF FORCE, is the purpose of formation. The objects to be attained are, effectual resistance to inaction, and the development of the infinite possibilities of existence through an infinitude of spheres of life.

The law of evolution, operative through all eternity, is the law of Procreative Force. This appears plain when its operation, as indicated on foregoing pages and in former chapters, is scanned. Reproductive force is essentially progressive. Exhibited first in the co-operation of the positive and negative magnetic forces of qualified atoms, which results in the stimulation of motion in a universe of atoms, it, at length, after in-

ternimable ages, during which it has been periodically exhibiting added efficiency, reveals itself as an incarnated force, at first of the low grade developed in some forms of the vegetable kingdom and by the most insignificant orders of animal life; and, afterward, as a Perfected Force; individualized in its two distinct principles in male and female forms, the latter, embodying the Positive Procreative Principle; the former, the Negative. Concerning this incarnation, more will be said on a succeeding page.

To effect this grand result, what an eternity of effort has been required! What a travail of ages! and what a birth has resulted from it! Nature with all her legions of forces could do no more than this, in this vast period, with the means at her disposal. System has wrought with system, sun with sun, planet with planet, element with element, form with form, until a climax is reached—a method is evolved, that is the most efficacious possible for exercising the procreative function, forever operative for all progressive action in Nature. "Let the Heavens rejoice" and all worlds "be glad!" for from henceforth, their children shall be multiplied like the drops of water, or the sands of the sea; and they shall develop the strength of giants!

A grand epoch is reached when the incarnation of the Procreative Force is effected. Hitherto it has accomplished the work of evolution through centres where the promiscuous intermingling of Positive and Negative in a diffused state was productive of extremely tardy action. The first step in the direction of centralizing this force was the removal of the barrier that shut off the flow of creative energy through the universe of matter. This taken, a second step was easier and more effective; and yet, so little was accomplished by the successive and progressive steps until the last crowning

result had been reached, that — to use a plain comparison, but not an exaggerated one — a moment of action in the ensuing periods was as effective for accomplishing real progress in the work of evolution, as an age had been before.

Who has measured the eternities which precede formation in a universe that has been stimulated to action after a cycle of rest; or, indeed, after a single eternal period of rest wherein only partial degradation of matter has taken place? Time is the succession of events that constitute Nature's life; and to attempt to measure this succession in years, is to count the thoughts of Deity, to measure the plans of the Infinite, expressed through measureless periods, as the human mind conceives of time. Eternity is used as a comparative term, as language furnishes no other that is at all adequate to convey anything like a correct conception of the comparative length of the cycles and single periods of alternate rest and action, described in the first chapters of this work; and referred to in the present chapter. Early geological periods, of such vast length as to baffle all conceptions of the mind of the explorer of the strata of those ages, point to an era beyond these,— the immeasurable cometary period of the body, which must have exceeded in length the planetary period already passed as a million of years exceeds a day; and still farther back in this remote eternity, is dimly discerned the period when earth and her sister planets were unborn; when the mother sun, a nebulous structure, was condensing and giving birth, first, to one, and then to another, of its formations; and still more remote and altogether inaccessible by human science, but yet, hinted at by it, is that probable period when chaos embraced in its dark, repulsive bosom, all suns, all worlds of infinite space. Eternities multiplied by eternities,

and the product but a moment of Nature's, God's, Infinite life!

Procreative Force slumbered in the bosom of infinitude, while yet there was universal chaos,—before the "GREAT I AM" had propagated his Force to commence the work of incarnating Force in form in the present order of Nature. This is evident from analogy. Reasoning back to chaos through eternities of alternate rest and action, wherein Spiritual spheres and all their grades of forms and substance have co-operated with matter for the perpetuation of the established order, and taking into consideration the law of progress, that is as eternally operative in Nature as the law of life itself, the inevitable conclusion is reached, that the present order had a beginning. Precedent to it, Spirit was, Matter was. The plan of Nature was the present plan, since the law of action then operative evolved Nature as it is in the existing order. Spirit—Mind, co-operating with matter, evolved an order which was by the plan of concentration of force in forms, and incarnating Deific Force in the human male and female forms in such proportion as to cause the twain in co-operation, in working out the purposes of being in the exercise of the Procreative function, and every other office pertaining to them as human beings, to be representatives of Deity in the Physical universe, and through all spheres of life; the ultimate of their being to be—*putting on Deific Perfections, and so concentrating Spirit to the ultimate stage where Deity exercises the perfect attributes of mind and body.* Deific Man in his sphere of action in the universe, *as a perfected grade of humanity*, is the embodiment of all perfection, and hence, must be a Unity of Power, Wisdom and Purpose,—must be Deity, according to the true acceptation of the term. Not the one man or the one pair, who are but as atoms of Deific

Force, but the perfected grade entire. What more can God be than this? The idea of Divinity is Perfection; and when man was exorted by an inspired one of old, to "go on to perfection," he was prompted to pursue his devious way to the climax of all possible existence. This is the only possible true interpretation of the language, whether men have so interpreted it or not. "Male and Female created he them," is the language of the ancient oracle. The Deific Force is dual — Male and Female. Thus is God represented by the diverse sexes. This is according to the Bible of the Christians, and to Nature's Theology.

The Creative Power has been personified, from the fact that it is a force made up of forces that can, by no means, be separated and the existence of either be maintained. Man and Woman are the One upon whom Nature conferred the function of Creator, in the Image of her Great Inherent Magnetic Force, or Creator of life; which is two forces in co-operation. The twain are one, as a Creator; two in individuality, with relations to Nature and each other independent of the one paramount relation of sex. The male appellation conferred upon the Creator, is simply expressive of power; as that prerogative has been supposed to belong more to the male sex than to the female. The title of man, applied to the whole race, whole communities and societies, male and female, has become legitimized by use, the language affording no term exactly expressive of the idea. The plan outwrought by natural law as the present order of Nature is thus exhibited as the eternal plan, as far as man can comprehend; with his powers expanded to comprehend principles. "God, the same, yesterday, to-day, and forever," exhibits the infinite possibilities of his being in the molecule, the world of forms, and the infinitude of his days, wherein his modes of action are as various as the resources of his

wisdom. Let man pause on the present boundaries of analogical reasoning, and adore! believing that where Infinite Wisdom reaches, there Man, the Child of the Father, is destined to reach in the years of his maturity.

The ancient seer, a portion of whose revelation of the order of creation is quoted as introductory to the subject in hand, than whom, none has given a more graphic and expressive delineation of the order of evolution in earth's history, represents God as saying: "Let *us* make man in our own image." This is significant of the truth, that at that period, Creative power was exercised by Individualized Spirits—personalities, who represented the pre-existing Force; which was God, from all eternity. Earth, and all universes of worlds now in existence, are late creations in the order that had its beginning, as above stated.

Mind is mind ever, and whatever be its mode of manifestation, it ever acts the same; its faculties adapt themselves to the circumstances of their position with regard to their material environment. In sleep, physical man represents a world in chaos; that is, his faculties are enwrapt in the haze of unconsciousness, in consequence of the failure of the physical brain, through the energizing influence of the blood and nerves, to stimulate the action which is consciousness. The material habitation of Mind, and mind itself, must rest; and the repose of sleep, and of decomposition of matter of the universe, is the necessary result of the activity of previous consciousness. This law inducts investigation into the secret of the Ever-existent Potentiality of Nature; into the supremely satisfying recognition of an Unchanging Intelligence as the head of Nature. Whatever the plan of manifestation, there is still a God to manifest. Jupiter himself could not change the decrees of the blind God, Destiny, who ruled in chaos and night; so God is subject to the law of his own being.

Mind organized *after the pattern* of the Supreme, signifies mind *of* the Supreme. The Intelligence in man expresses the being and mode of being of the Intelligence in Nature. Derived at first, in individual man, as a germ from the great store-house of Nature, it gathers of its like from the same source, unfolding, gradually, the attributes and faculties inherent in mind, as the man advances toward maturity. Nature yields up to the expanding germ of Deific Life the proportions to complete its unfoldment, as the germ in the seed draws from the matrix in which it is planted, like substance of the parent form, to cause its expansion and growth into the parental likeness. The germ of intelligence is itself proportioned as mind, or individualization could not take place. The faculties of mind must each be represented in the germ, or there could be no expansion into mind. When conception takes place, a germ of mind is incorporated with essences of every grade forming a human organization, which essences it vitalizes, and starts the process of unfolding a form like the parental one. So it appears plain, that without the process of evolution, or generation by physical parental force, there can be no individualization of germs of mind. Incorporated into the form of Nature, co-operating with all physical forces in carrying on the processes of life of the universe, mind, by being individualized in human form, but carries out its original mode of action; it simply concentrates its legitimate action in forms, thus rendering it more effective for expressing its powers and attributes. Spirit and matter co-operating through the perfected centre of Procreative Force, —the Female and Male human reproductive organs, reveal in clearest light the mode of Procreation of all force and form, and all life. Hence, the Individualized spirits, female and male, are, in their unity in duality,

a perfect representation of Nature as a whole;—its Mind and Body.

Intelligent Spirit has no other method whereby to express itself—only the one mode—through the gradations of substance forming material and spiritual Nature; which mode is expressed in the Individual. Therefore, it follows, that intelligent entities, high or low, are individualized men, wherever they exist. There can be no realm of "elementals" or "elementaries," below the human; no Angel, Archangel, or Seraph, or being of any grade, in the Supernal Spheres of life, that does not bear the Human Form. There can be no re-incarnations of spirit entities, as there can be no dissolution of that which is, in its nature, as immortal as Deity. To re-incarnate—reinstate in another mortal body a spirit from the higher plane that once had birth on the mortal plane, would be a complete subversion of the laws of Nature. The re-productive function is only operative with essences of Spirit and matter—not forms, or organisms of any kind. The mature plant does not revert back, as a whole, to be reincorporated with the germinal essences of soil, atmosphere, sunlight, and moisture. It concentrates essences in its seed that represent it, being like it—of it; and so the seed produces its like. Nature has other uses for the plant she has reared at so much expense. She is engaged in the work of passing material up through the crucible of formation, from stage to stage, progressively; ever utilizing forms and the material composing them, of specific grades, as stepping stones to higher stages of action and life.

Man as a spirit rehabilitates himself in garments of material essences, to do work on the material plane; his Will-power being the enginery by which this is accomplished; and not,—most emphatically not—the reproductive force. Nicodemus might well pause in

astonishment and incredulity, supposing a literal interpretation to the injunction of Jesus,—"Ye must be born again." But a full explanation of the requisition, gives it a beautiful and expressive signification. So there is a signification to the term, re-incarnation, that implies a living truth; a law in perpetual operation in the reproduction of the human species. It is the signification expressed in the re-incarnation of elements of a plant in its successor—its offspring. Essences of the plant have been re-incarnated, and have thus helped to compose a new form. Other essences, with those comprising the germ, are organized into a form like the parent—not the parent.

A child is an incarnation of escenses that have forever formed part of the substance of mind and outer Nature; have forever been contained in an organization, as atomic substance of every quality and grade. In other words, it is prolonging an immortal existence of the mind elements appropriated by the mode of concentration of force, as before explained. By no possible interpretation of Nature, or the law of the human being, can it be maintained, that it has previously lived as an individual mind or being. Its immortality in its present form is that of Nature, since it has ever lived in germ in this same form. Its spirit, as mind proportioned into attributes, has forever been a part of the Divine Mind, and its bodily structure, corresponding to that of Nature, and proportioned of its elements, partakes of its immortality. The being derives conscious existence by attracting of its like, and thus strengthening each individual faculty. In the womb of Nature, it served to form part of her conscious life; and now that it is a world of itself, it is conscious as soon as its individuality is assured.

Individualized man, as an entity possessing powers

kindred to those of the Supreme Mind, is an efficient helper to Nature, as soon as the functions of individuality are conferred upon him. He assumes power and control by degrees; and there is none to say him,—nay,—in dealing with forces under his command.

Adam and Eve—signifying the race, male and female, people all worlds of space prepared for their occupation, thus constituting a Universal force; which is also an immortal force. Once the race had assumed its place in Nature, it assumed Deific functions, as the representative of Deity. As grade after grade of the race is developed, and intelligence progresses, the Deific Attributes are brought out in stronger light; and as a superior grade attains to all knowledge of Nature, and acquires that "dominion" which is its birthright, it assumes what of right belongs to it—the true function of the Supreme Mind.

"Before ever the worlds were made," in the present order, the Great Supervising Power exercised the forces of Nature as perfectly as the then existing order permitted. Matter was endowed, as now, with every order of force; but all these were in embryo until evolved by the necessary action. Evolution would bring them forth in their proper order, and in the time determined by the grade of energy in action. Diffused force, however, was incompetent to perform in the same space of time what concentrated force could; therefore, tardiness marked all action—such tardiness as is entirely incomprehensible in comparison with the present grade of activity.

Suns, systems of worlds, emerging from chaos with only Chaotic forces in operation! The thought itself confounds human reason, contradicting human experience. What impels to action that which includes all there is of matter and energy? The answer can only be this: Chaos is not, in the accepted sense. In other words, that which is termed chaos as relates to the uni-

verse in inactivity, is order which permits evolution; or Life, Deity, Nature, were not. Body and Spirit, the universe was, from infinity, these forever co-operating by the one method for the maintenance of life. Planes of spirit, distinct from planes of matter, as in the present order, forever existed; for by this method of arrangement alone, was evolution possible; by it, alone, could there be effectual co-operation for starting the stimulation of the universe of matter, in such complete rest as follows dissolution of its forms. Leverage is requisite to start the mighty machinery of Nature, and set the wheels of progress in such motion as shall induce formation. *The leverage of organization on the plan of Mind*, and mind so situated with reference to the grades of matter and inferior spirit, that action can be propagated by the natural mode described on former pages. The universe from eternity possessed a brain, a model of which, is the human brain. The sacred temple of the human spirit is where forces are adapted to the functions of that spirit. The etherial forces of the system concentrate in the brain, within whose spiritual recesses reigns supreme the Intelligence which prefigures Deity in its functional activities within and upon the system. Force concentrated as mind and perfected as Deity, could only exercise the office of Deity in the universe. This is a principle exemplified in all action. The plane of force which is Deific, must coincide, in each universal system, with the grade of spirit nearest allied to it, and the order of arrangement this implies must remain unbroken from eternity to eternity, in the universe in action and at rest. The principles which lie at the foundation of development of a universe in disorganization after a single period of rest, hold at all such periods, be they of what length or character they may. The universe in chaos before the present order was instituted, represented a condition which must in-

evitably result were the Deific forces, *per se*, withdrawn from every plane of life below the highest, and concentrated in that. In such case, there would be diffused throughout universal Nature an aroma of force, which would actuate matter to such motion as would prevent utter stagnation and nothing more, until extra stimulation could be effected. The eternities would roll around like the hands of a dial, repeating themselves, apparently the same, at the successive vibrations of the pendulum, time. The stimulation would come so tardily and so weak, as to start such a grade of progressive action as is herein described. This absorption of force by the Superior Plane would be like shutting the human spirit within the spiritual brain by the absorption within it of the ethers which serve to connect it with the physical man. There would result a coma that would continue until stimulation effected the necessary distribution of force to cause a higher quality of action. Or the entire separation of spirit and body might take place, since physical man is subject to death, the spiritual universe exerting its force to withdraw his spirit to its plane when the physical loosens its hold. This separation is not death or disorganization of the spirit, but its placement where it belongs, on a plane of life where it balances the physical still, as when in the form, and part of the great whole which so perfectly co-operates with the physical that severance of force between the two is impossible. The coma of the Brain Forces of the universe could only delay activity; it could, in no wise, dissever the rare spheres of force that were commingled and intertwined throughout the length and breadth of Infinity.

It is conceivable that the round of life of Deity is varied by periods of rest, and inactivity of the material universe, such as that is shown, analogically, to have been, which preceded the institution of the present order

of Nature. This order is characterized by the distribution of individualized spirits throughout the universe on the different planes of force, which make these effective for development of the physical universe. The former order was rest, as indicated. Precedent to that, there was one wherein Deity expressed himself as in an active order; for such is the lesson taught from all eternity.

Of planes of force, Spiritual spheres, etc., more will be said in the proper place. The author would remark, that in the discussion of this subject in the pamphlet entitled, "God the Father, and Man the Image of God," one of the early works of the writer, it was not carried to its ultimate as here, for this reason, among others; a pamphlet does not afford space for the full presentation of all principles brought to view in it. There is full agreement in the spirit of that short work with what is presented in this more extended one.

Stimulation from the central Plane of the universe, all lower spiritual planes being in chaos, but arranged by the established order (see Vol. I, in reference to planes of stratification of the chaotic material universe), was progress, or formation, effected without the means developed through the activity then generated. The ethers which pervaded substance as the vehicles of Deific force, were so rare as to be tardy conductors of activities from grade to grade. There were lacking the forms to evolve ethers, and hence, those which vitalized matter were the lingering remnants of the hosts that had enlivened Nature in the preceding active order, reinforced, and stimulated to the grade of activity they exerted, by elements impelled among them from the Superior Plane by Deific Will-power. The leverage this Plane possessed, whereby to move upon the universe, to stimulate activity and induce formation, was an attenuated sphere of force, so rare that it barely sufficed for the purpose. Germinal essences were untold eternities in

developing into such generative forces as were required to institute suns. Then again, after this first great epoch of formation had been succeeded by vast eternities of inaction and complete decomposition, others were requisite to prepare them to re-form suns, and go a single step in advance of the stage reached at the preceding epoch of formation. At length, suns were condensed into planets; planets clothed with appropriate surface elements and forms; and individualized spirits produced as the climax of universal action continued during a series of eternal periods so vast that finite mind fails to comprehend their number.

The *Nirvanna* of the Buddhist finds its exemplification in the inactivity of matter during the eternal period of rest from which Nature emerged when the present order commenced. Deity emerged from *Nirvanna* to exhibit his attributes in the work of Creation, and all creative action culminates in *Nirvanna*. The Buddhist's heaven is a state of unconscious inactivity or complete annihilation, which is complete rest. A vein of truth runs through this legendary theology, which, without doubt, like most systems of religion, was derived through seers, who attempted, by symbols or otherwise, to give a history of the universe.

The Child of Hope was born at length, and all Nature was inspired with new life. Deity was withdrawing himself from behind the veil of gross substance, and his Attributes shone forth resplendently in the order of life that put on immortality as a garment. To illustrate the tardiness of evolutionary processes prior to the introduction of man in the present order, and the efficiency of the race in this order, on physical worlds and co-operative spiritual planes, as a co-worker with Nature, it may be remarked, that as much more effective for doing real work, and doing it well, is this method of co-operation than the former, as man is more efficient as a tiller of the

soil, a cultivator of the fruits of the earth and animal species, and a builder, than unassisted Nature. In the order of things, without physical man, the soil is cultivated, fruits and animals are produced, and dwelling places are prepared for the orders of life as they appear; but by this manner of work, ages are insufficient to accomplish what man can do in a few years by co-operative labor. Nature's unintelligent husbandmen have been most efficient for doing her work of cultivating the earth, but their processes are too expensive of time and energy to be profitable longer than until they have effected the purpose of producing successors superior to themselves. The earthquake, the volcano, the flood, the glacier, the tornado, the ebbing and flowing tides of ocean, are some of the enginery that has accomplished work that human genius does at far less expense, and, withal, more perfectly.

The above illustration will suffice to show the analogy between Nature's work without man, and man's work with Nature. Man is master after he has well learned his trade; but he is apprenticed to Nature in his infancy, and learns all he ever knows through application of the powers of his intellect to this, his teacher and his model. With the acquisition of knowledge, work grows upon his hands; and he applies laws discovered in his dealings with matter and observations of forces at work around him. Single handed, he is weak; this he learns by experience. Co-operation is the offspring of necessity. This is born of the family relation. Extending outward from this centre, it develops tribes of co-workers, with whom experience works wonders, as a teacher. The path to efficiency is rugged, but it is sure; the scholar is apt and the teacher thorough; each designated course accomplishing a stage in the career of the student which prepares him for higher acquisitions. Thus onward the race makes its progressive way, a con-

queror at every step. It masters its master when it has learned to apply natural laws to every use, every emergency that may arise.

The infant does not more surely prefigure the man, than does the race in its infancy the Perfected Race. Inheritor of its parents' attributes, the child succeeds to their estate by degrees, maturity fulfilling the parental bequest. The child assists the parents while it learns of them. Its services are essential to the household organized on the idea of the family — parents and offspring

The household of the Universal Parent is organized on this special idea — Parents and children. The children of this household do a very important part of the work of the family, the part that, previous to their advent, was either undone, or done, as it were, by hirelings.

To throw aside metaphor: The use of man in the universe is to exert power in every direction in which he can develop it. The race is designed to exercise the functions of Nature as it discovers how to do it. Ignorantly and at "haphazard," while in its infantile state, and ignorant of its office and its powers, it will do this, impelled by its instincts and the necessities of its situation. Even in this state, its office is fulfilled on the physical plane; for the race is so distributed, so interlinked with other forms and forces, being one with, and dependent upon, them, that, in the nature of things, it cannot do otherwise than co-operate with them according to its legitimate manner.

The Procreative Function as perfected in man, needs further illustration in connection with the principles above stated. Enough has been said relative to the nature of the Reproductive Force incarnated in the diverse sexes, to fix in the mind of the reader the important truth, that the diversity expressed in sex is the real diversity of the elements operative in the Procreative

function. The law of Differences, known to be the effective law of progress, is perfectly exemplified in the diversity of the sexes, and the forces which they each embody and represent. By the law of correspondences, the Positive and Negative forces — Spirit force and Material force — are represented on the material plane by purely material forces in co-operation, the superior being the positive, in the nature of things. The rule is, that whatever combines the greater amount of force of any kind, is positive to whatever combines a less amount of force of the same kind. Of the sexes, the male is positive and the female negative, physically, as is well understood. Spiritually, it is the opposite, as has been already explained, and by the law just stated. The female form, being the weaker physically, is less repellent to spirit, and therefore combines more of this force than the male, who is thus made the negative, spiritually. On the other hand, the male, combining a greater amount of material force than the female, is, of necessity, the force that overbalances the physical force of the female organization, as a positive does a negative, subjecting it to the interaction of the reproductive forces. The wooer wins by seductive arts only possible to the male; while the female excites admiration, attracts a mate, by qualities which she possesses by virtue of her sex.

The impulses of all Nature in an active period, and all forms in the full vigor of life, are to procreation. It is the plan, and by it perpetuity of life is secured. In the animal world, where the important purpose to be specially served by it is the propagation of like forms, the impulse is periodic with the female; and the male is subject to the female in its exercise. With human beings, the lords of Nature, the creators of force for the world below them, this impulse is subject to laws that do not prevail with the brute creation.

Creative energy converging in the human race, the lat-

ter is endowed as a Creator by virtue of the superiority of the forces it develops. It derives force from all Nature below it, being related to all forms and elements as no other form or kingdom is. In the Arch, the keystone is sustained by the combined strength of all the material below it in the structure, and in its turn, secures the stability of the arch. This illustrates the position and peculiar office of the human race among all lower races, forms, and elements.

Through his Magnetic Forces, man becomes the regenerator of the domain which it is his to occupy and renovate. He comes upon the stage of action the resultant product of previous multiplications of force into force; and, henceforth, he is to be the main factor in the reproduction of forces through forces. Forces have culminated in him; hence, he is at the head, and reacts with all below him, as the Superior force, physically and spiritually. When once the Infinite Universe was peopled by Man, it was on a plane of development where progress would be perpetually progressive. The instinctive forces of matter stimulated by this added force, would be progressive, as eternity succeeded eternity; each successive reawakening of action occuring after a shorter interval of rest than the preceding, and each successive active period accomplishing more of creative labor than the preceding. The race of man increasing in numbers and efficiency as the tides of eternity ebb and flow, the "right arm of the Almighty" is putting on strength. Power is being developed to overcome the resistance of matter to the forces of Intelligence.

Man a Creator! who says he is not? In the little world, his home in physical life, what wonders he achieves in this capacity! Launched upon life on an oasis in a vast desert,—or, in other words, born in a little Eden in a world where, outside of his contracted domain, savagery, in the strictest sense of the word, reigns su-

preme, he creates conditions of civilization and enlightenment,—becomes the Vicegerent of God, executing the Will of Intelligence as fast as he develops intelligence to do it. Invested with power to do what he will with the elements about him, subject, always, to the Superior Intelligence of the Spheres above the physical, he represents Deity in his sphere of action. He infuses his own magnetic life throughout his localities, stimulating all the energies of matter, impelling increased activity of all forces of animate and inanimate substance, thus acting a God to dependent Nature. His presence on a planet is the promise of the progress of the body with a constantly increasing impetus; whereas, without the race to perfect the processes of development commenced previous to his appearance, stagnation would ensue before the meridian of planetary life is reached.

To subdue a wilderness, the pioneer carries with him something besides the axe and the plough; and his harvests, produced at the expense of toil and sweat, and, perchance, of blood, are not alone the fruits of the earth that fill his granaries and rejoice his heart. The magnetic sphere, which is a part of every individual's personality, and which impresses itself upon all persons who come in contact with it, in a greater or less degree, is the potent agency with which the tiller of the soil is furnished—the worker with Nature in whatever capacity, whereby he may impress himself upon his locality. This is the means through which he impregnates his surroundings with a life element that stimulates all action,—reinvigorates the soil, quickens the procreative impulses of animals, impels vigorous life in the vegetable creation, and tends to correct local elemental conditions, or to infuse new life into the surrounding atmosphere. Part of his life itself goes out with the labor of his hands. All Nature about him is drawing upon his forces to keep up their activity. He breathes the breath of God's life upon

matter, and it is vitalized anew, to serve the higher purpose of ministering to his necessities. The settler's cabin in the forest or on the waste is a Centre from which emanate life-forces, that speedily find their way to where they are needed; and the forest grows more luxuriantly for it; the birds trill more sweetly their love-notes, the little flowers tell the tale of their renewed life; and the desert place begins to put on a robe of darker green, and to prepare to "blossom like the rose."

Energetic man diffuses energetic forces wherever he moves. It is not the sluggard, of whom the prophet spoke when he said, "I went by the field of the slothful, and lo! it was all grown over with thorns; nettles had covered its face, and the stone wall thereof was broken down,"—that is thus a benefactor. The garden does, indeed, bloom more freshly, the crops grow more vigorously, for the active husbandman who is much in his fields, and whose interest is supremely in his work. He lives with his growing crops, and lo! how he is rewarded! He is little aware how much of his life he has given to them, or how much of it he has stored up in his harvests, or left in the slumbering soil, that will, in the future, repay his outlay. The flocks and herds share the care of the farmer, and they too, share in the life-forces he has to dispense. Who, that has observed at all, has failed to note the influence of man upon domestic animals, and caged wild beasts? Intelligence is imparted by the master or the family, to animals that are much under their care and influence. It cannot be otherwise. Animals are possessed of intelligence, and they attract of the higher forces of the Superior race, and increase their powers of intellect, as well as improve all their other natural forces, by coming in contact with it.

The subtle action of the fine magnetic elements that go to thus stimulate the life-forces of lower Nature, is the action of reproductive forces. The life of every atom,

every form, is perpetually quickened and sustained, by a process that is the interaction of the Positive and Negative principles, as in procreation. Perpetuity of life is perpetuity of this action, and the waning or cessation of life, is its waning or cessation. Sex being the expression of this force, the vigor of the procreative faculty in the sexes is the measure of its intensity in any locality or with any race. The sure indication of the degeneracy of a race, as of men or animals, is the waning of the vigor of the procreative faculty. The seal of Death is on a people when its children are few, from the lack of capacity of reproduction; and as surely is its locality doomed; for all conditions will sympathize with the dominant power there.

The relation of all forms, all grades of life, to each other, that any section yields, is the relation of positive and negative, or the interacting upon this basis. The stronger force is that which has the ascendancy, and whose influence is propagated through the medium of each weaker one, with which it co-operates in one way or another. Man being positive to all possible forms in any section or locality, his is the force that takes precedence there; and it will be diffused through the agency of whatever he comes directly in contact with. The atmosphere of his home, charged with his magnetic elements, diffuses life-germs throughout his neighborhood for the use of lower forms. In this sense, is he a Creator after the pattern of Deity.

"The Spirit of God moved upon the face of the waters;"—that is, diffused itself in life-germs, or spirit essences, through the agency of spiritual beings in proximity to the planet that should vivify the elements, and make the production of light possible. "And God said, let there be Light; and there was light." This creative act, according to the Seer, followed directly upon the diffusion of the life or spirit element thrt in-

vigorated conditions at the Surface. This is also according to the gospel of Nature. Magnetic elements, of the character of the ethers which are light, or which react as light upon the surface, the only form of substance that could convey to earth's surface the magnetic influences of the parent sun in quantity to be sufficiently appreciated by surface matter to cause progress, were the result of this stimulation by spirit-forces. The light was "good," — it served its legitimate purpose. It marked the rising and setting of the sun, according to the sacred oracle, even when perpetual darkness, like the pall of death, enshrouded the planet; the sun, moon, and stars, being hidden behind the thick canopy of the vaporous atmosphere until the "fourth day." Each restimulation of matter by this "moving of the Spirit of God" during the long days of creation, was followed by new creations, according to the same authority.

The Procreative impulse in man is in conformity with the necessities of Nature below him. Invested with power to "multiply" his seed, and "replenish the earth and subdue it," his impulses to procreation are the drafts that Nature is making upon him, her Lord, for carrying on her work in every quarter of her domain. The animal creation responds to them in the quickening of its reproductive functions, and all inferior nature, in degree; the quickening being, in reality, propagated through every variety of form and substance. So man is in God's stead on the earth. He exercises the prerogative of Divinity in the office he fills in this respect. The sexes, woman and man, are God manifest in the flesh, carrying on the creative processes of Nature through the holy Procreative Function; which, in itself, prefigures God, the Creator. Celibacy of the healthy, vigorous man and woman, is sin against Nature; is robbery that will, inevitably, be visited with retribution upon the heads of the perpetrators. The natural exer-

cise of the human appetites brings blessing; and the use of this function, within the limits prescribed by Nature, is necessary to health and vigor. It is no infraction of natural law, but the reverse, to exercise it while the vigor of Manhood and womanhood remains, even when offspring are not the object. It needs no homily on domestic duties and privileges, to make plain what the experience of all human society, in every age, and what individual experience, the world over, confirms; viz., the truth of the above two propositions. Nature does not belie herself in man. She writes her law in this respect on his being too plainly to be misunderstood, and too forcibly to be resisted. The monkish practice of celibacy has wrought immense harm in society from first to last. Conceived in ignorance, it has served the purposes of despots in church and state; ignorance having ever been the chief pillar of its support. The dishonor of impotency, is the seal of Nature's displeasure at the failure of any of her children to serve her purpose of creators of force for the lower world. History is replete with evidence of the disastrous effects of enforced celibacy; and, at the present day, the harvests of licentiousness, ignorance, and imbecility, that society is reaping in some parts of the world, are, in part, traceable to an imbecile, licentious priesthood, with whom celibacy is enforced, and whose influence for evil has exceeded that for good.

In prescribing rules for human conduct—fixing the laws which are to govern the exercise of the faculties and propensities, Nature has provided for their enforcement by fixing penalties for their neglect. The misuse of a faculty is sure to bring proper punishment; and in the vital matter of the procreative function, its abuse in one way or another, is attended with consequences that are only evil. There is, or can be, no compromise in the case. In the case of the appetite for food, which

will illustrate another appetite as natural; this can be pampered into inordinate use; it can become an instrument to enslave and imbrute, and, finally, to destroy the victim who has given himself over to unrestrained indulgence of it. On the other hand, to crucify this appetite by abstaining from the proper quantity and kinds of food, is to starve the body; and with it, the whole nature, in a measure; it is to deprive the individual of the necessary stimulus to all the attributes and faculties. The spiritual, in physical man, is so intimately related to the material part, that it suffers loss when the laws of the being are in any way misused; and so asceticism is opposed to spiritual growth and strength, although it has, in all ages, been esteemed as a means of promoting these, and hence, pleasing to heaven. Fasting is a medicine for body and mind, under certain circumstances; and abstinence from strong stimulating diet, spiritualizing, and promotes intellectuality, if it is practiced judiciously; that is, not carried to the excess of depriving the body of all stimulus from animal food and healthy condiments.

The application of the above is plain. To destroy the balance of the system by complete abstinence from the exercise of one of the most vital of its functions, is on a par with the effect of its abuse by excessive indulgence. A faculty or an organ dormant from disuse, is a loss to the individual of a source of power; and the real loss is proportioned to the office it naturally holds among the faculties or organs. The procreative function is the stimulator of all the others of the system, when properly used; the whole being, intellect included, deriving strength through its activity. The reactions of the nerve-centres upon each other, induced by the exercise of this function, are what is required to stimulate all to proper activity. It is not saying too much to declare that the brain-forces are those most susceptible to these reac-

tions, since this centre absorbs the vital energies created by stimulation, in excess over any other centre ; it having the balance of force in the system. This always, be it remembered, when the exercise is according to the demand of the system. The waste of brain-forces by excess can be inferred, when the truth is comprehended, that the procreative act is a creation, in fact, of vital elements to be expended in some manner; it is a draft upon the system for forces that can only be evolved in this manner, and which are needed for re-stimulation, as above stated, of all nervous energies, and for the uses of Nature otherwise. Too frequent drafts of such vital forces exhausts the nervous energies, which cannot draw strength or stimulation of vital power when the vital essences are wanting to co-operate to this end. The philosopher properly conceives that the fluids not wasted in such excess are turned back upon the brain as stimulators of thought, and that the creation of ideas is the result, the offspring being worthy the immortal intellect. But, if he loses sight of the fact that there must be an act to create the energies that so operate, his philosophy falls short of showing what is the law that governs in this matter. Functional activity suspended until it becomes dormant, in this case, entails loss to the intellect and the whole being, which cannot be fully compensated by other means. The man can survive and flourish, after a fashion, who has lost a limb, or an eye ; but he sustains a loss of power, nevertheless. Intellect will sustain itself under very adverse circumstances, as will all the other human forces, by virtue of its capacity to adapt itself to circumstances, and supply deficiencies by substitution ; however, Nature unerringly points the law as above indicated, and experience verifies it.

The line between proper use and abuse is fine-drawn, in this case, yet it is like a gulf fixed that must not be crossed if man or woman would be such in the truest

acceptation of these terms. The highest sense of these words is that which applies when the perfect law is fulfilled in the creative capacity of the unity in duality. To fall below this is to fall short of the aim of their creation and placement at the head of the kingdoms of Nature. In view of this, it behooves individuals to study this subject with the view of making rules of conduct for themselves, and educating themselves into observance of them. No one can properly judge of another's exact needs. To specify in regard to what constitutes abuse or lawful use, in this matter, would be impossible; since constitutions and temperaments differ. The wise will be a law unto themselves; and the foolish will sin, whatever rules are prescribed for them.

Seasons of abstinence from the exercise of many of the natural appetites, the sexual among the number, promote health of body and mind, under certain circumstances. Spirituality and mentality are specially aided in their development by thus partially suspending the natural vigor of action of the physical functions. By this process, the mental and physical are so balanced that intellectual labor can be more readily done. With a great proportion of mankind, the physical powers have so far the predominance over the mental and spiritual, that the latter are held in abeyance, to the great detriment of individual progress. Temperance in all things, is the means by which health is maintained after it is secured. This applies to mental and spiritual health and strength, particularly. The proper balance once achieved, it must be maintained by a careful regulation of the habits. A repetition of the remedy will be necessary, at periods, determined by the intellectual labor to be done. Dieting is the habit of some close students of science, who learn by experience, that the nerves are steadied, the brain cleared, and the powers of observation quickened, by a course of abstemiousness. The

great Agassiz was an example of this. But, to perpetuate the practice of undue abstinence, is starvation to the body and dwarfing to the whole man; as witness the character of ascetics everywhere, and in all time. Man can unmake himself, as it were, by living contrary to the law of his being. He can promote a species of spirituality at the expense of a vigorous mentality, by crucifying the natural propensities, which must be in legitimate exercise if the whole man is in full, vigorous health.

A high spirituality is consistent with the natural exercise of the functions of the human being. Man, with all his powers, with his unspeakably high office in the universe of forms, is not the creature of a day. His being, his office, his functions, as man, are as eternal as the being of God, whose prototype he is in these. God, the Creative Power, is what he is by virtue of the Procreative Force. Shorn of this, Deity is a nonentity. In its highest form, the bequest of Nature to Man, this Force bespeaks his immortality coeval with that of Nature; and bespeaks him a Creator when he puts in exercise the attributes of his being.

It appears, according to the significance of the Procreative Force, and of man's office in Nature, that the Procreative function pertains to him eternally. A spiritual being, he is endowed as when he was formed man; and to rob him of a single attribute, would be to unmake him. He stands in the same relation as a creator of force for the world around him, as a spiritual being, that he does as physical man. He does not reproduce his species, as in the physical state, but he reproduces conditions favoring reproduction of his species in the physical world. His Magnetic sphere commingles with those of physical beings, when he wills it so for good purposes; and by his own vigorous manhood as a spirit, he infuses energy into the magnetic forces of those with whom

he thus comes in contact. His power thus exercised from the spiritual side, is a sanctifying influence to the procreative impulse. It elevates it above the brutal plane, where it would stagnate and eventually die, but for the higher stimulation of Superior Spirit forces, that descend from the bending heavens like the rain and the sunshine of God, in whom all "live and move and have their being."

The tendency of all life is to death,—of all forces is to exhaustion; and it is through restimulations by higher forces that any processes of life are perpetuated. This law makes each successive grade of matter or forms the stimulating, the uplifting force to the preceding;—makes physical man the helper of lower nature on his own plane, and Spiritual man the benefactor of man on the lower plane. This law unites earth and heaven—the physical and the spiritual universe, in everlasting bonds; makes man in the flesh forever dependent on man in the spirit; unites them in the most intimate relations, or preserves the close relations established with life; unites sphere with sphere of the heavens of the soul, drawing all men upward towards the goal of their being, the perfected state, where they will be installed into the mysteries of the Inner Temple where God forever dwells. "He shall draw all men unto Him"—is the gospel of this Divine law.

It is the habit of mankind generally—made so by misconception of Nature's law, to belittle the Procreative impulse, to regard it as purely pertaining to physical life, and as expressive of grossness. Education, and above all, the misuse of the faculty, has fixed this belief in the minds of men. To outlive it, to soar above it, has been, and still is, the ambition of some reformers, as though it were a degrading attribute. Were it, in reality, what gross men have made it—a minister to sensuality, it should be accursed like a deadly Upas, whose fruits,

whose every emanation, are poison. The fatal results accruing from the abuse of this holy attribute of humanity, are most expressive of its character. The fountain once disturbed and poisoned, all the forth-issuing streams are infected; not one drop of pure, limpid water is furnished to the thirsting multitudes who seek refreshment from them. The springs of life, it has been shown, that are the vigor, the potentiality, of manhood and womanhood, are fed from this fountain of Force; and its streams go out into society, and reach into the lower world of forms and matter. To degrade this fountain, is to debase all life that in any way depends upon it. It is to sin against one's self, against society, and all Nature, for disturbances of every kind are propagated far and wide, and this in particular, writes itself indellibly on the conditions of a progressing world.

The curse of Nature is upon the transgressor of this law. She writes her anathemas in such plain characters that they are known and read of all; and men turn with abhorrence from the victims of lust, shunning them as though they were smitten with the deadly Plague. It is a plague, than which none is more deadly, or can be more destructive to conditions favorable to life and health of individuals, communities, and nations. It is Death in its most hideous, repulsive form, as all men know, when the abuse of this function is persisted in, to individuals; and from individuals, it is propagated to society at large, and to life below; and so the localities where the sin is prevalent become like very lazar-houses of corruption.

Judgments such as Nature inflicts for infringements of her laws, without the intervention of man, have overtaken such peoples; and these judgments have been hastened by human intervention. The sword has assisted in extirpating races that were unfit to live and propagate. Where propagation is defilement and exten-

sion of debasing conditions, it should cease; and the Powers Above have assisted Nature to cleanse herself, by stimulating forces to act to this end. They have allowed nations to scourge nations, and even to wipe them from the face of the earth, that the "land might be delivered" from their corrupting influences, and a better race be established. Curses never come unbidden. Nature is ever true to herself. Seed sown will produce a harvest of its kind. An energetic, prolific race is as sure to make the imprint of these qualities upon its surroundings, as animal fertilizers are to enrich soils. The magnetic element that inheres in such fertilizers is quickening to the soil, and vegetation takes it up and thrives upon it. If animals and man lack the vigorous, life-giving element, Nature will lack the source of supply of the same, which is derived as the chief stimulus to vigor in all its departments.

Sympathy of conditions between all grades of forms and elements over entire planetary surfaces, and throughout univeral space, is the law; and when one member of the universal family, or of the body, suffers, all suffer with it; and in proportion to relationship and proximity. Man is like the husbandman placed in an uncultivated field, to live and to produce conditions that will sustain life and make it enjoyable. He cannot shirk his responsibilities and live. Untrue to them he dies, root and branch; true, he thrives, and his seed after him; and the planet becomes a garden under his hand. So the waning of activity, that is periodical, and disastrous when planets are in the early stages, before man with his superior life-force and his genius has arrived upon the stage, is modified by man's influence. It becomes a less disturbing influence by degrees, as surface conditions improve before man appears; but his presence gives a marked impetus to progressive action in this respect; and where he is true to the laws of his being, as

generations succeed each other, catastrophes will cease at these depressing intervals, and only minor effects result. Barbarism, itself a result of subsiding activity of Nature, is sure to aggravate the conditions that favor its existence; as witness the Deluge of Noah. Thus Nature vindicates revelation, her handmaid for aiding in the dissemination of necessary truth.

The office of the race of man makes its distribution throughout the universe a necessity. The end of creative effort attained in man, is the distribution of power such as the race can wield, for the furtherance of all formative action. The peculiar offices mankind perform by virtue of superior intelligence and a thorough knowledge of Nature's laws, after they have become spirits and inhabitants of Superior Spheres, will be described in a future volume. For this, it suffices to state concerning the peopling of the physical universe with the race of man, that all systems of the same grade and order simultaneously evolve it in some prepared planets. Each epoch of this evolution, of the many of this character that occur in a universe in a great period of action, is one that gives an impetus to progress throughout universal Nature. This will be obvious to the careful reader, who comprehends the full significance of man's functions. "The Morning stars sang together for joy," that the babe was born that was destined as a Savior to all races, kindreds, and grades of life of the empire of the Omnipotent, when earth gave birth to man; for the distant universes,—all the orbs of space, partook of the blessing of the presence of this added Deific Force in such proximity as to prove a power for good to them.

A planet is incomplete in its means for high development of surface conditions until the race is distributed over it wherever it can get a foothold. And its energy, its persistence, is sufficient for all emergencies; no barriers arrest its advance, as it marches on to occupy the terri-

tory that is its own for the taking. Arctic snows, desert sands, watery wastes, and torrid heats, only serve to stimulate the inventive genius that lies dormant until aroused by necessity, and that will find means to overcome, even these difficulties, when men are in search of homes, subsistence, or adventure. The rule of "the survival of the fittest," applied to the race, is what insures its stability; for it is by the extermination of the debased elements of human society — the corrupted tribes, remnants of tribes and nationalities, by the means described, and whatever other means Nature interposes to this end, that it is preserved from such contamination as would be fatal to the entire race.

The types of mankind that are developed to interact with each other, are figurative of the types of forces that interact for the production of life, and of grades of matter and forms that interact for the promotion of progressive action. The same law of force is everywhere prevalent, in the arrangements of inanimate substance, of animate forms, and intelligent life; — in the arrangement of races of men, tribes, nations, communities, and individuals; of types and species of the animal and vegetable kingdoms, and of the diverse elements composing earth, air, water, and the ethers of space. All the simple and complex varieties of life and force are upon the one principle of diversity — of action and reaction, of Positive and Negative. The foundation principle laid in the fundamental force of being, the reactions of Spirit and Matter, is propagated through all the avenues of progressive life, on every plane; spirit and matter interacting in every thing that has life, and propagating action to forces that belong, specifically, to either plane — spiritual or material.

Sufficient has been said upon the subject of the Philosophy of life, and of the law of Evolution, to suffice to make it clear to the intelligent and careful reader. Ap-

plications of the principles stated on the foregoing pages will be frequently made in what is to follow; therefore, it is of the utmost importance for a proper understanding of the whole chapter, that these first principles should be thoroughly understood.

Spirit, as a force connected with material Nature, and necessary to its life, is ignored by most scientists, and it is to help in dispelling this great error, which is such a barrier to progress, that this attempt is made to state the true theory of life. By confining their observations to the sphere of physical elements and forces, scientists have failed to reach the solution of the paramount problem of the ages. The example Nature has provided to illustrate universal action stands out the prominent form among all forms, inviting investigation as the acknowledged epitome of the universe, and it seems incredible that the scientific world should ignore the key to the, so-called, mysteries of Nature.

The embodiment of Mind, of Intelligence, as the Life Principle of Nature, seems to have been the idea of the Poet Philosopher when he gave utterance to the following sentiment:

> "All are but parts of one stupendous whole,
> Whose body Nature is, and God the Soul."

Metaphysicians have come very near to the truth in their investigations of the relations of mind and body; and had not materialism clogged the powers of perception of reasoning minds, preventing clear insight, a true theory of life, embracing a belief in spirit as its fundamental principle, would long ago have been established. But "every thing in its season," is Nature's rule. It is, "first the germ in the seed, then the blade, then the ear, then the full corn in the ear." Truth reaps her harvests after time has fully matured them; the work of cultivating the soil, seed-sowing and watering, preceding the gathering time, as with the thrifty husbandman.

Even now, the landscapes are glowing with her fields of ripening grain, and her granaries are filling. "Lift up your heads and rejoice," therefore, ye diligent laborers, who esteem her acquisitions of more value than golden coins, or the diamonds that gem the crowns of royalty!

Reader, pause awhile in the whirl of life, to reflect upon the statements here offered for your consideration. Think on the mystery of your being, — your relationships to the world of matter and of mind; the responsibilities you sustain to all; think upon life, upon death, and the hereafter; think upon all you would do and be; the hopes you have based on life, and the possibilities you have dimly discerned in yourself through the mists with which a false philosophy has beclouded your mind; and think on death, that comes to consign you to the oblivion of the grave before life is scarcely begun, or any of its aspirations are fully realized: think upon God, the Great Invisible Presence, in all, through all, and of all; the Benefactor of all, in whom you "have your being"; and of Nature, the mother on whose bosom you rest, and from which you draw your support, in common with all that is; reflect upon all these things in the light of what has been given above of the philosophy of life, and see if there does not dawn upon your understanding — if it is not already there — a full comprehension and appreciation of these words of the inspired Poet: — "There are more things in heaven and earth, Horatio, than have been dreamed of in our philosophy." "Our philosophy" has come as far short of giving you a true insight into your being as it has of giving you a true comprehension of anything that pertains to the character of God. The ideas it has generally advanced upon subjects connected with the philosophy of life, of the being of God, and of man, and of Nature, have been misty and misleading. They have left out of the problem the main elements necessary to its solution, and so

have left their votaries to wander away into the darkness of misticism — into impossible theories and unprofitable speculations. Be persuaded to launch out from the old, well-worn channels of thought of the centuries, and consider well the philosophy that is here presented, authoritative, only, as far as it is Nature's Philosophy.

In introducing the discussion of Evolution of Species, it is necessary to recapitulate some of the principles already stated, involved as they are, necessarily, in this branch of the general subject.

Evolution reveals itself as the prime law in the grand succession of life characteristic of the universe. *Life* is synonymous with *progress* — with *evolution.* Cessation of evolution preceding the vast periods of rest, which are the order, indicate, as the reader understands, the exhaustion of the forces of matter, which necessitates rest; and through these eternities, life is still evolution of force, to be expended in still higher manifestations of life than characterized preceding periods of action. Quiescent forces are always prophetic of renewed vigor; not less in a universe of chaotic matter than in the system of a human being exhausted by severe toil. To restore exhausted Nature, the forces of the latter must simulate death, as nearly as possible; and reinvigoration is sure to follow this process in the healthy organization. Action and rest, reciprocally dependent states, and, like force and inertia, ever co-operating for the purposes of development; — this is the lesson man's mode of life teaches. Not less does inferior Nature in the most common and best understood methods of progressive action, illustrate the same law. Beginning at the topmost round of the ladder of life, where man is seen as a full exemplification of the one principle upon which all development forever depends, this principle is traceable wherever there is planetary matter to be

acted upon by the forces of a mother sun and system,— wherever there is matter and force co-operating. Vital phenomena are the same in essence in inorganic as in organic matter; the same law operating in world-building, in the evolution of chemical elements, as in that of animate forms and living tissue; as is evident from the phenomena involved in each case. Decomposition of tissue must precede the building of tissue; decay — decadence of force, or the falling back of matter to a lower plane, must precede the assimilation of matter by a living body,— so teaches physiology; which is the exact law of evolution disclosed by Nature in every realm. The process of condensation of worlds from the cometary to the planetary stage proceeds by alternate periods of action and rest; again, the work of preparing the planetary surface and surface matter for the evolution of organic life is accomplished in the same manner. On the planetary plane, forces are of higher grade than on the preceding ones, and are more susceptible of investigation. Arriving on that plane, they become incarnated in forms, as elements and species, which act and react upon each other after the same general plan and for the same general purposes as the atoms and elements of uncondensed matter, but by a far more efficacious method. Evolution has unfolded the effective force of planetary planes, which is Incarnated Force — Organized Forms. Henceforth progress must march on to more rapid conquest, aided thus by such a powerful auxiliary.

The evolution of species follows the preparation of surface matter and conditions to support them, as a consequence of this preparation; as these surface conditions follow as a consequence of the cooling process by which matter has been prepared to crystalize and form the various combinations which precede and initiate organized life. It is a step at a time, taken in the evolution of forms and forces,— from one to the next succeeding,

without overstepping any. Thus: From the plane of elementary life to the plane of the chemical compounds, is one step; from this latter to the plane of vegetable life, is one step; and from this to the plane of animal existence, is a step; and to reach the plane of animal life, matter must be raised from the first through each of the intervening stages to the fourth. On each successive plane a force is developed, to co-operate with existing ones, to raise matter to the next. For example: On the plane of elementary existence chemical affinity is developed, else formation would cease here. Conditions combine to evolve this force when planetary matter is in the semi-cometary stage. As fully described in the closing chapter of Vol. I, and the opening chapter of this, surface matter of earth underwent the ordeal of fire, repeatedly, after solidification had commenced. Decomposition,— degradation of matter — reacted with the unstable formations which resulted from the forces in action, with the precision that decomposition of tissue reacts with the vital process of assimilation, in the animal form; and by this process of periodic alternations, and passing through intermediate stages, the grand stage was reached,— chemical affinity was developed as a stable force. A stable crust resulted from all this action; chemical affinities acting with other forces upon matter prepared for chemical union upon a firm basis.

A grand stride, has been taken, in pushing matter from the elementary plane to the plane of the Mineral Kingdom. A platform has been laid, plank by plank, upon which the structures of the Vegetable and Animal Kingdoms can be reared; the material for the latter being prepared by the builders, Chemical Affinity and Vegetable Vital Force. The Animal Kingdom succeeds the Vegetable in the order of evolution, built upon the principle developed in the Vegetable Kingdom. The Mode of Organic Life once evolved in the vegetable, the

step is easy to the higher plane of animal organization. It is not like that from the Mineral Kingdom to the Vegetable, where energies are concentrated for the purpose of lifting matter over a broad chasm, so to speak, that which separates the organic from the inorganic kingdom. Such an arrangement of forces as is altogether new in the progressing world of matter, in the sense of being so concentrated, succeeds to the evolution of Vital Organic force; and it is a grand effort that achieves it. On the plane of the Mineral Kingdom forces act and react long on developing planetary surfaces, before the result is attained that must be, before another plane of development can be reached. Earth, air, fire, and water, commingle their forces for immense ages in the travail that precedes so mighty a birth. And when, at length, the "child of hope" is born, what is it? In what guise does it appear? An infinitessimal atom of protoplasm, a minute cell, embodies the New Force that is the "Babe in the Manger" to the waiting world.

Vegetable life once instituted in its rudimentary forms, animal life in corresponding forms quickly succeeds, as an effect of the reactions of Chemical force with the newly developed force — the Vital. The existence of the two Kingdoms, Vegetable and Animal, is coeval after the period that gives birth to the first rudimentary forms of the latter, through the existing species of the former, in the first age of its life. The essentially higher force, embodied as the distinguishing characteristic in the new form, has not been previously embodied,— does not belong to the type of form through which the higher is produced, but is evolved through the action of pre-existent forces — those pertaining to the parent form, and Magnetic forces co-operating with these. A draft has been made upon Superior Magnetic essences for the germ of a new force, by the superior conditions prevalent in the environment of the parent form.

This is precisely the recognized mode of institution of the mineral kingdom from the elemental, the Vegetable from the Mineral, and the Animal from the Vegetable; is according to the strict interpretation of scientific observers of the laws in action in the production and growth of the four Kingdoms of Nature. (*See "Conservation of Energy. By Balfour Stuart, LL. D., F. R. S." in Chapter* ——, "*Correlation of Vital with Chemical and Physical Forces. By Joseph Le Conte.*") The application of this law of evolution to the evolution of species through species, of all kingdoms, does not seem to have been made by those careful observers, who are doing so much in revealing truth as it is in natural law. This is the whole law of evolution of types, orders, species, and forms. Not a form of any species in Nature comes into existence, but through its operation. It is at the foundation of perpetuation of being, and of progress.

At the right period in a planet's life, Vegetable Vital Force, co-operating with chemical forces and the magnetic forces of the atmosphere, as light, and its related etherial forces, evolves Animal Vital Force. This latter force does not pertain to the vegetable. This principle should be thoroughly comprehended by the reader, for on it much depends. It is the New Creation to which Nature gives birth, through the instrumentality of the lower forms. The parent,— the Vegetable Kingdom, embodies the procreative force that begets this new creation, for there is no other embodiment of this force, no other mode by which it can be produced. It is not in the power of the Mineral Kingdom, neither the Elemental, to go above their own plane to work. These embody no forces that are adequate to evolve a force so far superior to their own. A step at a time, let it be repeated, and this on the solid ground of law as old as the universe, is the mode.

On the plane of vegetable life the procreative force is first concentrated in organic forms, which is the step indispensable to the further one of advancing organization to the next higher plane. Formative effort is henceforth to be expended for the purpose of improving the mode of organization, which is to be perfected by the means of evolution of species of all possible varieties; of founding type on type, and species on species, until the topmost round of the ladder of formation is inserted; — until the Keystone of the Mighty Arch is laid, that is the Living Temple of the Indwelling Spirit.

The principle of Conservation of Energy is fully exemplified in the derivation of force through force, by this law. The original Procreative Impulse that moved upon atoms in the primeval universe, causing aggregation, is transmitted through all the transformations of matter and force, unchanged in its essential quality, but modified to suit progressive Nature, until it is incarnated in the vegetable form; to be still transferred through form after form, to the highest; where, alone, it exhibits itself in its perfect character. The transformations it has undergone have not changed its character, in the sense of imparting a new order of action; they have evolved the perfected form of action, which was in incipiency in the original impulse. Conservation of energy implies preservation, and transmutations such as add efficiency to the original force in action, by impartation of stimulus to it. By means of this impartation a form of force is changed, a new force is created. The relationship of the new to the original force is just that of offspring to parent, of a species to its parent species, of a kingdom to its parent kingdom. The embodiment of a new proportion of vital magnetic life, is what changes the character of a force, conserving the old in the new. It is this also which individualizes offspring, species, and kingdoms; and confers upon the human being its distinctive

quality of immortality; which implies a Deific quality of force.

There can be no links missing in the chain of force; — no overstepping the boundaries fixed to limit the action of any force in the reproduction of another. However, there is variation in these limits, determined by the activities brought to bear for evolution or procreation in different periods, or under different circumstances. Thus it is, that a species may overstep the narrow limit allotted to it, wherein to produce its kind, and reach a farther boundary, where it grasps a proportion of magnetic life-force superior to, or different from, that it draws for offspring of its kind; which it confers upon offspring, causing them to vary from the parent type. There are yet other and farther boundaries that are reached, when a kingdom becomes the parent of a kingdom, and grand types in the various kingdoms become parents of others. All these variations are within prescribed limits, wherein forces may draw upon Nature for an added element to vitalize a legitimate offspring. The formative era develops epochs suited to the evolution of every kingdom, type, and species, a planet produces; these being periods when excessive stimulations of peculiar forces produce peculiar results. All eras are fruitful in evolutions, upon the same principle, though less marked in distinctiveness of character in some than in others.

The law of dynamics illustrates evolution to perfection. An impulse to motion begets motion, just in proportion to the force expended. Motion is conserved in superior motion, or in a quality varying from the original. The gradation of force exhibited as the result of the sun's action upon the planet, exemplifies the gradation of life from the Elemental Kingdom upward. Impulses generated at the sun's surface, are propagated in motions that gather or lose vigor as they pass from

sphere to sphere of elements, reaching the planetary surface as the vital forces heat, light, and electricity, being there transmuted again by the vital or mechanical processes they serve, or stagnating where vital energy is lacking to co-operate for higher evolution. Element is born of element, as motion of motion. Atmospheric light as an element, is born of the ethers that receive the impulse to superior motion from an inferior grade still, as stated in a former chapter. Of light are born yet higher forces,—forces within the brain of man and earth's bosom. The stimulation of thought through the sense of vision, is the arousing of ethers of mind, and conception and birth of ideas; which signifies the proportioning and appropriation of elements by the model of formation by evolution.

From the foregoing it appears, *that the law of Evolution is the law of Conservation of Force.* It also appears, *that evolution is through the co-operation of forces such as interact in procreation, and through the reproductive force perfected in the organic kingdom.* It will appear plain to the careful reader, that a kingdom, type, or species, resulting through the law here laid down, is a new creation in the only sense that anything in Nature ever can be. The law of evolution knows no change in its mode of operation. It is one from eternity to eternity; and by it, all things that are have been evolved in series of formations interdependent, and related; the later to the older of the same type, by direct order of succession, as children to a long line of ancestry.

The "Special Creations" that Nature knows are developments of the law of Evolution, not exactly recognized by the School of thinkers termed "Darwinians." The modifications of species that result through the law of "Natural Selection," are, in no instance, the change of a lower species into a higher, or of one species into another. They are the preparation necessary for

the radical process of evolution of new species through old. The improvement of a species is one thing, and the evolution of a new one is quite another. The principle of improvement of a species carried to its culminating point, however, is its development of a something radically different from the parent. Or, to reverse the order; the principle of degradation of species carried to its ultimate, is the unfoldment of something specifically inferior to the parent. The variations to which species are susceptible are subsidiary to the changes in specific characteristics which follow their multiplication; whether it be on the ascending or descending scale, or on the same horizon. Departure from a parent type in the first instances, implies further departures, as species develop differences more and more marked, in every direction.

It is relevant to the subject in hand — the principle of specific differences, to state the application of the law of evolution to the introduction of life on a planet, as relates to typical differences, which involves a repetition of a few principles stated in the first chapter. Types exist from the first; primordial life typifying, in degree, all subsequent life. Differences in type, at the first, are expressions of the diversity in qualities of matter and forces. The interactions of these diverse qualities must continue in the different species of the organic kingdoms. First expressed in the Vegetable Kingdom, then in the speedily following Animal Kingdom, in the incipient forms which are of so low grade of structure as to express but faintly the idea embodied in their forms, the differences are yet real, and prophetic of the future grand types and species which are to be built, each higher upon its immediate related predecessor. Primitive types are all combined in the one basic type, termed the Radiate. First individuals of that type differ in structural idea sufficiently to propagate different species; divergence from the primitive types continuing until the

boundary is reached, which, being overstepped, a new type is born in species related to the antecedent species of the older type as offspring to parents. The step here taken has been longer than ordinary, yet it is but a step. The original ideas of structure have here found better expression than in the antecedent type. Organization is being developed in mode. This development progresses through the grand types to the human, where the idea of form embodied in Nature is perfectly expressed.

Expansion of types proceeds as progressive development of a planetary surface evolves the forces of matter; there being the same limit to this expansion as to that of forces which they prefigure. Types reach their superior culminating point in a few select species; species in a few select individuals; in both cases the selection accomplishing the extraordinary end of elevating the type to the point where a departure from it is inevitable in the order of Nature. Convergence of force, for a purpose so indispensable, is a revelation of the possibilities of Nature under the action of law. The ideal form is in embryo all the while that variety is being developed, and forces are expanding; and convergence of force, at the proper period, after the manner pursued at every epoch of introduction of higher types, will bring forth the human type, the topmost branch of the tree of life, whose roots are in the Elemental Kingdom.

The Formative Era, including four great eras of planetary life, is characterized by action which is expansion of life in types and species, and concentration of force. Conditions fitted to each other during this vast period, and favoring the characteristic action, culminate in the evolution of stability of forces on a planet. The culminating point in formation, that where evolution of new types ceases after the original order, is when man takes his place at the head, as the fulfillment of the prophesy of form revealed in Nature. The highest is reached in

him; and what variation, henceforth, occurs, is to be after the plan of improvement or deterioration of types and species; not evolution of new ones. Henceforth, natural energies are to be expended on a surface regulated beyond the plane where great and specific changes can occur, such as characterize the formative era. A greater or less degree of stability of such orders of life as are suited in any way to prevalent conditions, follows as a necessary consequence of regulation of conditions; and also permanency of such orders as are on a plane suited to the human type. The great aid this type lends to the support of grades of life nearest allied to it, is an efficient means for their perpetuation.

The vital changes that are the order after a planet's surface becomes productive of organic life, until the above mentioned condition is reached, are fatal to the perpetuation of the great mass of species and grades of life beyond certain fixed limits of time and bounds of territory; these limits being decided by radical revolution of conditions over the entire planet or only partial ones that effect vital changes in localities ripe for revolution, and in others effect only varying conditions preparatory to fundamental change. There are certain low orders of life that are propagated through all eras after their appearance; these being such as are not susceptible to the influence of the changes periodically occurring; the depths of ocean being the localities they usually inhabit, their function being the working over of the slimy deposits into mineral substance, as limestone formations, etc. Many types of life at present existing are so nearly like the earlier ones they represent, as to be hardly distinguishable from the latter, as they are in fossil form. However, the real differences that exist are in conformity to the rule of change, which alone may be said to have had permanency of character, during all this vast period.

The improvements to which the surface is susceptible

after it has cooled sufficiently to allow of the evolution of life, measure those of which planetary life of all grades is capable; and the one does not more surely tend to advancement than the other. The variations of Species, fitting, as they do exactly, the variations of conditions over the surface, at any one period, or in a succession of periods, are as natural as the processes by which the latter are effected; and are brought about by the same means; — that is, through modifications of the law of evolution and its application to organic life.

The fidelity of Nature to the one plan of evolution in every realm of life, the similitude of forces at work in every department, are the exemplification of the truth of the theory, that Special Creations are only the order by the one plan revealed in Nature.

The position gained by the Darwinians, the advance guard of Naturalists, the Forlorn Hope, that dares the missiles of theologians and others hurled in the interest of "Religion" and against "Infidelity," and whose shafts are often pointed with contempt and ridicule, is just on the border line of the promised land of Truth. A few paces forward, and the summit of the Mount of Promise is reached, where all the glories of the Canaan of so many hopes and struggles are revealed. The remains of so many Moses lie interred in the mysterious recesses of this mountain, that it might seem too much to dare even to seek to gain a look from its summit. Yet, it may be dared; and the Joshua that will lead the hosts of inquirers into the land beyond will be immortalized. Agassiz, a giant in intellectual strength, and an inveterate opponent of the Darwinian theory, as is very well understood, in entering his protest against the transmutation theory, remarked as follows; and his remarks have a pertinence that entitles them to consideration; not exactly from the standpoint he occupied as a sworn opponent of the theory; but from the middle ground of

a theory that is not his, nor yet exactly that of his opponents. He says: "It is my belief that naturalists are chasing a phantom, in their search after some material gradation among created beings, by which the whole Animal Kingdom may have been derived by successive developments from a single germ, or from a few germs. It would seem, from the frequency with which this notion is revived,—ever returning upon us with hydra-headed tenacity of life, and presenting itself under a new form as soon as the preceding one has been exploded and set aside,—that it has a certain fascination for the human mind. This arises, perhaps, from the desire to explain our own existence; to have some simple and easy solution of the fact that we live. I confess that there seems to me to be a repulsive poverty in this material explanation that is contradicted by the intellectual grandeur of the universe; the resources of the Deity cannot be so meagre, that, in order to create a human being endowed with reason, he must change a monkey into a man." In treating of Embryology and its relation to the transmutation theory, he says: "What do these resemblances mean, from some of which we shrink as unnatural and even revolting? If we put a material interpretation upon them, and believe that, even man himself has been gradually developed out of a fish, they are repugnant to our better nature."

In the above two quotations are contained a whole sermon on the merits of the true theory, and the demerits of the erroneous ones. They both express the instinctive repugnance of man to the acknowledgment of his direct relationship to the brute creation, at the same time recognizing the fact, that Nature points in that direction when man seeks to trace his lineal descent. "What do these resemblances mean?" exclaims the great Naturalist, when he traces by Embryology the genealogy of man and all the vertebrate type of animals down to the fish;

or, what is the same, finds that, in the embryonic state, each type of the vertebrate class lives through the stages represented by adult life of every inferior type to the lowest; man being no exception; but revealing the order of vertebrate life through which he was developed, in the various stages of embryonic life. To put a truly "material signification" to such a fact as this, would be to ally man to the fish, indeed, and to derive the fish and its distant progenitor, the protoplasmic molecule, from soulless matter. "From nothing, nothing comes;" so the "material signification" falls for lack of a basis.

The correspondences of species that point to certain relationship, is the significant fact that should confine the observer to the points in issue between the two Schools—the Darwinians and the adherents of the old theory of Special Creations. The questions that should be asked of Nature are: Has a species of Anthropoid Ape gradually unfolded the human attributes, thus becoming the parent of the human race? or: Was the human species created human at the first? and: What was the parentage of the human, and all other species? To arrive at correct conclusions concerning principles so grand, and so all-important, too much attention cannot be given to details; as, persistence of types, and species, and the gradation of the latter, which is revealed by living species and by fossil remains of those now extinct. To oppose the law of persistence of types, the great argument of the Agassiz school, to that of close relationship of types, and the unfoldment of specific characteristics, is to array the strong arguments of each side against each other; which must stand or fall according as they agree with the truth in the matter. The fact is, both will be compelled to take a middle ground, and concede something to each other. Observation of living types and species, furnish arguments on both sides of the question; yet from this standpoint, the law of persistence of types and species is es-

tablished as firmly on the basis of phenomena as any other law of Nature. Embryology reveals the phenomena that harmonizes the two theories sufficiently to show a middle ground where another can be based more consistent with all the phenomena involved.

The physical characteristics of a species are, as revealed by Embryology, developed by stages; that is, a certain period of embryonic life is devoted to the unfoldment of certain functions and organs to match them, and other periods successively for certain others, until the being is completed by a succession of stages of growth, each one representing a specific stage, — or a species in the Animal Kingdom below that to which the being, fully unfolded, belongs; and in the exact gradation in which Nature unfolds species of the type up to this. This is significant of the truth of the principle, that a species does not change its specific characteristics, but is instrumental in unfolding a new one. The conditions precedent to the institution of the new are indispensable to its unfoldment. So it appears, that Species transmit, through the embryonic life of their successors, their characteristics. This is what these facts of Embryology teach, if they mean anything. That a form grows through stages, in this manner, that are not of ancestral derivation, is incredible; because contrary to any law and to all experience. The law of heredity, by which the child is like the parent, and by which ancestral traits crop out in remote generations, inscribes on immediate offspring parental characteristics, though these be related to the parents as offspring of the same species, or of a new one to which they have given birth. Thus, the characteristics of early embryonic life are modified into the higher ones of later stages, clinging to the being all through the whole stage of fœtal growth, and extending into the next stage, in some species, in rudimentary organs that are, in some cases, lost soon after birth, and in others, not until adult life.

Specific differences may be compared to individual characteristics, which remain fixed during life, but can be modified, in degree, to suit differing circumstances. Parental character, in the main, stamps the characteristics of the child upon it, though these may differ materially from those of the parents. From this it may be argued, that specific differences may arise from the extension of this principle of modification beyond the limit fixed as that of the parental specific character; this being effected by radical change in conditions of environment. This last named circumstance is that upon which the specific change depends, as without such change of conditions, modifications do not extend to the point of changing the individuality of species; and Nature furnishes no grounds upon which to base a contrary conclusion from this; her analogies evidencing in favor of the proposition. The environment, for instance, of the savage, binds him down to the savage state, and fixes the character of his offspring the same as his own. Change his surroundings, introduce him into civilized life, and his offspring after him, and the generation will soon appear that will reveal the influence of the change of conditions. New characteristics appear, and after many generations, the race cannot even be recognized as of the original savage type. Yet, there have been no structural changes, such as are indicative of change of species. The modifications have been on a scale consistent with the permanence of the original type of life, adding elements of stability which were a necessity to fix its durability.

The difference existing between the four diverse Classes or Grand Types of the Animal Kingdom are so marked, that it is with much show of consistency that it is contended that there is no evidence to prove that the higher were derived through the lower. And yet, it is conceded that they are connected by comprehensive types. This fact is so significant, that before it, in the

light of the successive discoveries of links in the chain of life, the circumstance of marked differences, as they are revealed at the present day, and in fossil remains, is of less moment in the discussion of derivation of types. Comprehensive types, as defined by Paleontologists, are types representing by typical characteristics, future ones. They combine, typically, with the strictly defined characteristics of the species to which they belong, others that are fully outwrought in a future species. These, as discovered and named by scientists, are links in the chain of life that connect lower orders of life with higher, being species that have progressed towards the point of culmination in the evolution of higher species; — towards the point — not to it. They are related to the species that are the real representative ones that usher in new species. The fact is noted by observers, that comprehensive types are less stable than their predecessors; and from this fact it might logically follow, that the links that are missing have actually disappeared. And this is true of the real links that joined the species that peopled earth in past ages, and that now exist. They were unstable from the very fact of the office they performed in the creative programme. Species, the links of types and species, so far exhaust their vitality by the extraordinary effort of giving birth to new species, that they disappear too completely, especially those of the higher types, to even leave their fossil remains. It appears as a strange provision of Nature, following, of course, from natural law, but none the less startling for all that, that this should be so. It appears as though foresight provided that no species shall arrive at maturity while yet the inferior one through which it had birth is in existence. Man revolts at the thought that the parentage of the race should be inferior to it, while he is in ignorance of the law of derivation of the Spirit, seeing no consistency in the notion that the superior is

derived from the inferior. Enlightenment on natural principles dispels many idle prejudices, arising from instinct misguided by ignorance. As Science brings to bear its influence in favor of the true theory of derivation of man and all species, this prejudice will disappear, and it will be no stigma to trace ancestry through the line of Procreative Force, which is Nature's Creative Arm.

Embryology has been asserted as giving no evidence of the relationship of the grand types, on as high authority as the elder Agassiz; yet, that it does, he himself is authority. In describing the ovarian egg, through which all animals are alike produced, he remarks: "The building material (of the organs) is, as it were, provided by the process which divides the yolk into innumerable cells, and by the gradual assimilation and modification of this material the organs arise. * * In a word, before the whole system works, it makes itself out of the elements given by the formation of independent eggs. Its first office is self-structure. At the period described above, however, when the new generations of cells are just set free and have taken their place in the region where the new being is to develop, nothing is to be seen of the animal whose life is beginning there, except the *filmy disk* lying on the surface of the yolk." The italics are not his. The "filmy disk," is most suggestive of the great type of the Animal Kingdom which serves as the basis of the life of the others, as this structureless mass serves as the basis of life of all the organs that are to make up the animal "whose life is beginning there." Indeed, the typical representation of species in embryo, are nowhere more expressive than here where the Radiate is prefigured in the egg of the Vertebrate. The gellatinous mass that composes the Gelly Fish is here exemplified; and farther on in the texture and appearance of the incipient organs, and in the unfoldment of the

perfect structure, both the Moluscan and Articulate types can be traced, typically, by the student who notes every appearance carefully, with no preconceived theory to be served by his observations.

The great naturalist quoted, finds what he terms a "unity of organic conception;" in other words, resemblances in the varied and successive types and species of each great class, that are as striking in the higher as in the lower orders of life. These "resemblances," says he, "mean, that when the first fish was called into existence, the Vertebrate type existed as a whole in the creative thought, and the first expression of it embraced, potentially, all the organic elements of that type up to man himself." They mean, traced back as they may be, to the lowest grand type of animals, and through it into the Vegetable Kingdom, and down still further, to the inorganic Kingdom, where the latter took its rise, that all types and varieties of forms of all kingdoms, were in the "creative thought," as the efficient means whereby the universe was to be unfolded to its utmost capacity; and further; they mean that this "thought" looked to the means through which this wondrous creation was to be effected. It was not merely an "ideal" creation that was to be, so there must be a real relation based upon the "ideal relation," that the naturalist asserts is all he can discover,—if it is to be a reality based on law, and evolved through law. The only mode of realizing creative ideas, is to project them on matter; and the laws of matter and force determine the line of progress that form shall take in reaching its climax.

The idea of creation is represented in the egg, as quoted above: "The building material is provided by the process which divides the yolk into innumerable cells, and by the gradual assimilation and modification of this material the organs arise." Here is represented the idea of the unity of life, and of the variety that suc-

ceeds to the unfoldment of the creative process. Cells represent organs of a form, and they represent, in this idea, the necessary basic types that are built upon one. First, the incoherent expression of type in the cell, the unfolding germ; and after, its gradual expansion and perfection, like an organ of the great body of Nature, as it is. And here, in the unfoldment of the embryo, *is the idea outwrought through matter*, before the very eyes of him that could not, or did not profess to see it. Germinal essences, the basis of all life, arising from the action of Reproductive Force, which is thus shown to be the basic Force; these essences passing through stages of progress, each stage being, really, one upon which an order of life is built; and passing on to the climax reached by the parent of the germ, the plane is reached, where evolution of new stages are no longer the order, but where forces concentrate to perfect the form, or matter on that stage; — how perfect the similitude between the idea and the physical expression of it! And how sublime the thought, that the Creative Mind thus simplifies the lessons man should learn, and thus repeats them "line upon line," so that he may not fail, at length, to take their significance.

It is true that the division line between the Grand Types is broader than that between species of the same type. They are so distinctive as to lead Naturalists to almost overlook the relationship that actually exists and is pointed out, but as having no significance in relation to origin or descent, by the class who persist in the "Special Creation" theory. The wide divergence of types arising from evolution by the order described, is accounted for by the diversity of elements created by the changes that usher in the Grand Types one after the other. Their use in Nature is to act upon all elements of every variety evolved in the course of the fitting-up process of a planetary surface. Water, earth, and air, are to be peopled

by living, breathing forms, that are to serve as purifiers of the element to which they are each structurally adapted. Types represent the diversity of the four Kingdoms,—Elemental, Mineral, Vegetable, and Animal,—and they react upon each other by the same law. Diversity arising from the natural conditions at the surface, is the necessary complement of the coexistence of thefour Types, as it is of the four kingdoms. Each is necessary to all, and all to each; and if their relations cannot be as readily traced and defined as in the four kingdoms, it is for the obvious reason, that science has not yet clearly fixed them. The subdivisions of the great types represent those of the subkingdoms; types, orders, families, genera, and species, having their representatives in each kingdom, that are related like them, and like them interact for mutual development, and for carrying on the work of evolution on every plane of all kingdoms.

The fact, that there is diversity of types and kingdoms, and that the almost infinite varieties of types are so interblended and interdependent, is almost demonstrative evidence in favor of the proposition, that it is by means of all the multitudinous varieties of life that matter is elevated and purified, and force evolved to suit the progressive stages of refinement of material elements.

The mistake that Naturalists of the Darwinian School are making relative to the derivation of species, is the one that naturally follows from ignorance of the law of life based on the existence of Spirit. Close observers cannot lose sight of, nor ignore, the resemblances of species which bespeak relationships, that extend in long lines from remote ages; and they trace the genealogy of some existing species far back through strata of many formations by fossil remains, basing upon this and other as pertinent facts, a theory that is the nearest to that revealed by Nature of any man has yet elaborated. The great factor left out of the problem is Spirit; and to at-

tempt to solve any question relative to natural phenomena without this, is like the effort to solve any problem in mathematics by leaving out of the calculation the most important factor. Such efforts as the latter must ever prove failures; and so will those of all who try to base life on physical phenomena alone, not recognizing Spirit at all, or in such a vague, unmeaning style as to give it no place in the world of causes that have combined to make Nature what it is. The pride and boast of Science, that it must weigh and measure all phenomena accurately, ignoring not the least iota that can, by any possibility, have a bearing in the discovery of truth — truth, that is the one thing to be sought for, "though the heavens fall," — this assumption, put forth by the exponents of Science, falls to the ground, and adds the greater stigma, before the steady, persistent efforts of Scientists to erase this factor from the problem of Creation. The phenomena that, above all others, would aid in correctly deciding the greatest questions of the age, are thrust aside, ignored, despised, as only worthy the attention of the most inferior minds; while the wise men go plodding along, leaving to the class of minds they most despise, the work of clearing up these important points in science. So be it! Nature is sufficient unto herself! She "hides from the wise and prudent," in their own conceit, what she "reveals unto babes;" who, by virtue of some capacity concealed from the common eye, are prepared to receive the revelation.

Physical phenomena are the key to truth. Men observe through physical organs, bring to bear the powers of intellect upon what is revealed to that intellect upon the physical plane, while they are on that plane. Mental insight is supposed to be sufficient to penetrate the veil of the physical and observe something that is behind that, or what the use of observing? It is the relations of things, revealed by this outside appearance, that most

interests the intellectual world; and these are apprehended by the Spirit,—they are the realities that Mind is most anxious for in all researches into things past and present. The relations of Mind to Matter thus exhibited, those of the ideals of mind expressed in the world of matter and forms, are the relations existing between matter, the inferior element, and Spirit, the Superior. They write themselves on all things. The thinking Brain expresses itself on the written page, and shows itself allied to all things by its capacity of reaching out into all fields of research; and discovering, classifying, and applying facts. The Magnetic Life of matter reveals itself in the multifarious forms the latter assumes, and in the ways in which it serves the purposes of Mind and inferior life.

To think, is to dissipate the materialistic notion, that matter is all of Nature. It is to establish the fact, that there is something intangible to the physical senses that operates on the delicate structure of the brain, to elicit the phenomenon of thought. The Magnetic fluid that operates directly on the physical brain being admitted to be physical, is yet too etherial to be grasped by the physical senses. Now, to step across the chasm that separates the material from the spiritual, is to recognize a fluid related to this so intimately that it interacts with it on the same principle that any positive acts with its negative. It is only to go a step further in the etherialization of substance, than is reached in the inappreciable nervous fluid that is believed to martial the forces of life and stand sentry at its portal. Who will presume to fix this point as the limit of the refinement of force! since it only occupies, so to speak, the vestibule of life;—the physical brain and system, as the usher to the Temple where Spirit or Mind dwells, which is a force that sways the other, though it is too etherial to act directly upon a grosser element! Who is willing to risk his reputation for sagacity and precision of thought in analytical

inquiry, by refusing to admit that phenomena point to a grade of force superior to the physical, whose interactions with the latter typify the interactions of magnetic forces on the plane of the physical, and are to the life of all Nature what the latter are to the life of subordinate planes in material Nature? Who is willing to broadly declare that Science can solve, to its own satisfaction, a single point vital to the great question of Origin of Life and Species, without admitting into the discussion something as yet uncalled upon, or kept at bay by sheer force of prejudice or unreasonable adherence to old theories and methods of observation?

The repulsion the learned feel to recognizing Spirit as entitled to a place among the Forces of Nature, to be discussed by scientific methods, is, without doubt, owing to the fact that it has always been invested with a veil of sanctity that forbade intrusion into its mysteries by the unsanctified. The consequence has been, that in dealing with the sacred thing, as it truly is, ignorance, superstitious credulity, has, to such an extent, taken the place of logical methods of inquiry into its nature and functions, as to drive from the field in disgust and incredulity, those best qualified to find the place in Nature where this force belongs, and to assign it its true office.

To specify the exact eras in the geological succession in Earth's history when plant-life and each great class of the Animal Kingdom appeared, and the particular species of the lower class through which the next higher was evolved, and the particular species or comprehensive type through which any higher or lower one of the same grand type was unfolded, is not the purpose in this work. It is for investigators to trace the principles stated here, and specify, in the interests of science, whatever links can be discovered uniting types and species. Such specifications here would extend the work beyond

reasonable limits, since so much space is required to state the principles involved in this most comprehensive subject. Incidental reference is all that can be made to any type or species of either kingdom.

The divergence of types on the downward plane, and the deterioration of branches of the great types, follow as the necessary consequences of conditions outgrowing them; or of their falling behind the higher representatives of their type from the fact of their becoming isolated from such influences as are necessary to their progress. The high orders of Mammalia, for instance, that culminated in the Post Tertiary period, left far behind them many species that deteriorated, after a certain stage had been reached; this consequence following disturbances that affected local conditions unfavorably in some instances, and reversed the order of progress—that is, turned the tide of development from the flow to the ebb. There is need of all the orders of life that ever make their appearance on a planet; so the perfect justice of this natural arrangement appears plain. The scavengers of the present day, that are the descendants of more noble types, are elements of safety for the higher inhabitants of any district where they are found. There is always going on the process of decay, and disintegration that causes an accumulation of elements detrimental to life, and that must be reabsorbed by some congenial form in order that advanced vital conditions may be undisturbed. The myriad forms that people earth, water, and air, all have their peculiar uses in the element where they live, and have become what they now are on the earth, through the modifications that have taken place in species, since the period when evolution of species was the order. Stability of conditions does not signify stagnation; change that is a gradual uplifting of all that is susceptible of improvement, and decay of that which is not, is the order after such stability is gained as com-

pletes the orders of life on a plane, with the surface structure.

Paleontologists discover that the radiation of types from a grand type, and of species from a species or type, start, not from the lowest or highest branch or branches of the preceding type, but from intermediate ones; the radiations being upward, outward, and downward. "Comprehensive Types and associated species," says Dana, "occupy nodal points, as they may be called, or points of divarication far remote, in most cases, from the lowest species of a group." And again: "A type is not developed by the appearance of species in the order of grade." Divergence from the "nodal points," is by the law of modification by conditions, and by higher types and species superseding lower ones, and *vice versa;* according to changing circumstances and the requirements of successive ages.

The planet has outgrown the flora of the coal era. The gigantic Carnivores and Herbivores of the Post Tertiary have no place in the fauna of the present age; neither the monstrous reptiles, and the huge reptillian birds, of the ages before the Tertiary. Conditions have modified species so that they coincide with their uses in this age. The Devonian fishes have given place to those of to-day, when the purity of the waters and air are consistent with the existence of aquatic animals fitted to the age of man. Exuberance of animal life marks the eras of culmination of types, for it is then that there is a superabundance of vitality that is utilized for pushing forward the work of transforming conditions at the surface. Aerial life is developed when the atmosphere becomes fitted for it, and when it can serve the purpose of the higher Mammalian species of after ages, whose lungs require a pure atmosphere.

Every thing in its proper order and time, as before remarked, is Nature's maxim, from which she never de-

parts, only in seeming. Typical mammals, typical birds, reptiles, and fishes, which are not true comprehensive types, or, are not the originators of these great types, appear, as the harbingers of the forms they are not qualified to unfold. They are premature unfoldments, and imperfect in structure, and do not propagate their kind beyond a certain limit. The true lineal descent of the true types is not, hence, through these typical forms or their progenitors.

The distribution of types and species of the Animal and Vegetable Kingdoms over a planet from the centres where they take rise, is effected through the means of migrations of families or individuals, and through winds and waves, and the birds of the air, that scatter seed before the enterprise of man takes up the work. An equilibriated temperature over the surface is the potent means, that in the early eras, favors all grades and species of life, throughout all Zones. The gradual changes of climate, that occur as continental surface unfolds its regulated character, and atmospheric and ocean currents are gradually fixing the thermal lines, favor the full unfoldment of the great types in all Zones, and develop adaptability in species to their several habitats. The age that fixes the outlines of the Zones fixes the habitat of species; determines the orders of life of both kingdoms, that can, henceforth, thrive in the several Zones. The modifications of types by climatic influences, is in progress for many ages before their characteristics become fixed; and the ordeal that confers hardiness, exterminates the weaker species of a type in extreme and temperate latitudes.

Vegetable and animal life appear simultaneously in many localities over a planet, and the Grand Types make their appearance in the four quarters of a planet at the same time, or nearly so. The thermal temperature of the waters, which is the element that first gives birth to

life of both kingdoms, favors evolution of life over vast areas of submerged surface, where the rock is of the proper quality to yield its currents of force, to aid those of the other elements, in enriching sedimentary beds which yield the first germs. So it is that the centres of life are numerous from the first; and instinct impels life out from these centres, as limbs branch out from a tree, and lesser limbs from the larger, and twigs from these, so filling the circle with the completed form; the leaves, in a manner, representing the individuals of species that occupy all the available surface and all elements.

The principle of evolution of species through lower species may be illustrated by exemplifying a species, as of land animals,—tracing the law of modification to culmination in the evolution of a higher species. This will exemplify the evolution of the human race. A species whose instincts are properly developed chooses its location in accessible territory that is favorable to its existence and expansion. It lives on for ages, developing strength and establishing stability through the law of "survival of the fittest," improving its instincts and all general characteristics through this means and the gradual improvement of surroundings. The period of culmination arrives, at length, when it has reached its climax of expansion and development as a species. Improvement has done its best, and still it is unchanged in its specific character. The individuals of it of highest character, however, propagate their kind on this plane until a change comes in the environment that favors their further improvement, which change at length culminates in such altered conditions, *that the germinal essences change their character, to the degree, that the specific characteristics become changed in offspring.* One species may thus give birth to several, before its vitality is exhausted; this variation being in consequence of the

decided difference of conditions of the different localities where they are produced. The changes that are thus instrumental in bringing about such great events, were delineated in part in the latter part of chapter second.

The earth has reached a stage distinct from that which gave birth to the parental type, and hence, elements are provided that may be appropriated for germinal life, that were not in existence in the previous stage in the same form. The magnetic forces of the planet have been so stimulated that a new force, or new forces, have been evolved, which are incarnated in the new species. It is Nature, the Great Mother, that has instituted the birth, by providing a germ that is different from that supplied to the old order of forms.

It appears from what has been said in relation to the subject here and elsewhere, that *Nature on the spiritual side provides the life-germs for all individual forms of every type and species, and for every new species; using physical organisms as the matrices through which to give birth to form, and the reproductive impulse as the means of instituting it.* Life is from the same source, be it of what grade or type it may. *Spirit* is the "Descending Dove" that consecrates matter to the work of formation. By the act of generation, parents do not impart to offspring of their own life-forces sufficient to complete the individuality of the latter. To use a familiar comparison, they sow the seed which is instinct with life, and the germ in the congenial soil, draws to itself from bounteous Nature, elements to cause expansion into the form which was only germinal in the seed. The parents link the germ with Nature, in a manner to force the latter to complete what generative force has begun. The attractions of the implanted germ are for its like, and, with proper conditions, they are of a strength to insure its growth and unfoldment into the perfect type of its progenitors.

The human species being a type of all, the manner of unfolding individuality by the human germ is illustrative of the mode of individualizing species and forms of every grade. Born of woman, human beings are, on the animal side, related to the animal through ties of blood; on the spiritual side, they are related to the Great Father by ties as close as bind parent and child. Begotten of the procreative force, like all other forms, they come into being, at first, through this instrumentality, when the spiritual forces of a planet are prepared to confer the proper grade of germinal life. Species of animals become perfected to the degree that they culminate on the plane just below the human; and further progress on the animal plane is, hence, impossible. Did planetary development cease here, there could be no further progress of life or species. Were it the order that all forces concentrate on this plane, this epoch would be the culminating one of a planet's existence, and speedy dissolution of its forces would ensue; for progress or degradation is the rule, and there is, and can be, no long lingering on any one plane by any form, or system of forces.

It is well here to state, in regard to the subject of human development, that the climax of evolution was reached on three distinct sections of the planet contemporaneously, and ancestral species were three, so nearly allied as to produce man, each of them. The human type is divided into species by ethnologists at the present day. The technical signification of the word species, applied to fixed differences in type, that relate to structure, etc., does by no means sustain this classification. Varieties, there are many, in the human type. Varieties within the boundaries of a species, are defined with perfect propriety, as accidental subdivisions of it; the variation not extending to the limit of changing specific characteristics, but modifying them, it may be, to

the extreme boundary of a species. "Nascent species," varieties of the human race may be termed; the term signifying differences bordering on real specific variations so nearly, that it is as though the line were almost overstepped, that limits variation within the boundaries of a species. The human race is a unity in variety. Its office is the same wherever it exists; all varieties of the type being adapted to the conditions which developed them, and also to the work of improving these conditions and themselves. Intelligence and physical vigor are what constitute the saving qualities of families of mankind; and these are fostered by environment; being at first conferred on primitive varieties in proportion to favoring conditions of parentage and sections where they appeared. Human varieties cross with as much facility as families of a type, where both are fertile. The power to propagate indefinitely which offspring of mixed varieties possess, is what decides their relation to be that of individuals of a species.

"A man's a man for a' that." For all the distinctions of race, color, and intellectual capacity, all men are endowed with the spiritual principle that constitutes them children of one family. "Heirs of God, and joint heirs" to the dominion of Nature, all are made by the superior proportion of the Superior Force conferred upon the species when it branched off from the parent ones. Here was convergence of force to the point where one superior form assumed its place where God appointed it, according to the bible record, and according to the immutable law. The three parent species were so nearly related in respect to spiritual force and intellectual capacity, that they verged to a point on the boundary line of species, and the offspring of each were human; — those produced on that one plane where the spiritual force exerted its utmost strength in obedience to the call of the attractive physical forces. A variety,

distinct in very marked characteristics, represented each of the three ancestral species in its own distinct section; which three were to co-operate as diverse forces, and yet sufficiently related to serve as necessary helpers to each other.

The question as to the particular species of animal that served the purpose of implanting a germ that should afterward be fecundated with a force superior to any the planet could furnish, sinks into insignificance beside the grand principle that traces the derivation of the higher germ to a spiritual source. According to this principle, new specific qualities are derived, not from ancestral species, but from Nature, that has prepared the latter as the generators of the germs that are to expand and draw from the realm of unincarnated force, elements to fix diversity of species in the offspring. The axiom, that what one has not he cannot give, applies here. The new specific characteristics the parent species had not. They typified the coming form in all their character; their characteristics had been so modified as to push them to the verge of the higher plane; but there was a chasm they could by no means cross. They exhausted the possibilities of their being in giving birth to germs of such high order, and their fate was rapid deterioration, and quick extinction. Up to their own culminating plane, they had progressed like all other species; individuals representing the species had passed this plane, as fixed by Naturalists, and had improved farther; taking on typical characteristics of this superior successor. This was "passing the Rubicon," and beyond, they found the fate predicted of trespassers on the forbidden ground of an exclusive aristocracy.

The law of generation that makes the animal the progenitor of man, fixes animal characteristics in the human constitution, and they can never be eradicated, more than the relationship of spirit and matter; for the ani-

mal is the link that binds the race to the kingdoms below, and from it, the latter inherits propensities as important to its existence as any it ever possesses. The inherent qualities of true manhood, are, in a degree, prefigured in the brute. What the brute has in part, the man has in full proportions. Man's mentality, and his instinctive qualities, are a combination of those of the world of animals below him. In some individuals, a characteristic of one tribe or species will be very prominent, in others, another; and so can be traced in humanity, here and there, among different tribes and races, all brutal instincts; from the sly, groveling propensity of the insignificant rodent, the guile of the serpent, the treachery of the feline race, to the more noble impulses of the higher animals; as the faithfulness of the dog, and the domestic beasts of burden; the independence, and sense of justice and confiding trust that is exhibited by the two latter and the elephant, the patience of the ox and camel; etc., etc. Men sometimes exhibit the brutal traits intensified, destroying life for the mere love of murder, or pilfering for the love of it. This is an exhibition of the inversion of natural faculties. Carnivores destroy life to satisfy an almost insatiable hunger; they feed as prey can be obtained, and kill that they may feed, and for protection of themselves and their young, and to defend their right to their females. Man, normally developed, does no more than this, even in a low state. Savagery tends to an inversion of the human faculties, and men in the so-called civilized state, often exhibit the perverted traits of a savage ancestry in a stronger light than the more natural ones of the animal race.

The ancestral species of man — the same being the case on any planet, — had high instincts. As the comprehensive species that foreshadowed the intellectual race that was to be, they were a marvel of intellectuality in the animal world. The mothers of the human race were

spiritualized to a degree that no other animal could be, by their instinctive habits. They were protected from contact with other animal species and with all males of their own species except their mates, by the superior instincts of the males. The instincts of the species were monogamic; and by this means individuals propagated pure specimens, generation after generation, in localities secluded from invasion by intrusive individuals of other related species that were to be feared.

Seclusion in localities where abundance prevailed, and all surroundings were high, and calculated to foster all high instincts, was the necessary condition to the uplifting of the parents, and especially the maternal being, to the plane where germinal life might be of the quality to insure the reproduction of the highest possible specimens of the type; and to go beyond this, at the opportune moment, when forces were ripe for the impartation of a superior germinal life, to quicken the embryos that reproductive force had provided. The parents of the race fed on ambrosia and nectar, in gardens where beauty bloomed for them, and where Nature had profusely scattered such fruits as yielded the highest magnetic elements possible at the time. They gathered to themselves, through their food and all their environment, the highest grade of these elements they could appropriate, which was the highest in existence until the new force was added to Nature in their localities, that was to transform conditions there. Then Nature endowed the germs they reproduced with the new force, and a new species was born. They had even surpassed themselves in generating a germinal life that was of the quality to be attractive to germinal mind essence. It is a wonder of Nature, ever, this overstepping the bounds of species by germs, sufficiently to catch the breath of a more divine life than the parents can transmit, that Nature is holding in readiness for such

as are properly endowed. And yet, it is the miracle of life,—the principle upon which every form is instituted.

The quickening period, with the human embryo, marks an important epoch in its physical unfoldment. It is the period when the physical forces are quickened by an influx of energy that strengthens every organ; and endows the incipient being, throughout, with new and more energetic life. With this energizing of the material being comes that of the spiritual. The physical and spiritual forces of the embryo are in sympathy, and when the time arrives that the outer being must be quickened, then it is that the after-germination, spoken of on a former page, occurs. Then the incipient individuality of the embryonic being bursts into complete individuality. Then the "breath of God" is breathed into the embryo; and what was before the germ of an immortal being in the image of Deity, becomes fully immortalized,—invested with the attribute of intelligence and every human faculty, in the degree that fixes the eternity of the individuality. The germ possesses, previous to this, these faculties only in incipiency; that is, in incomplete proportions; and without this quickening process, it could not reach birth; for the physical quickening is the sure compliment of the spiritual, and both together clothe the embryo with the attribute of being, in a fullness that insures its full unfoldment; other conditions being favorable.

The life conferred by parents at conception is of their own; the generation of a living germ being effected through the co-operation of the forces of both, supplied from every part and element of the constitution, physical and spiritual. The foundations of the being of offspring are laid at this period, when are impressed the parental characteristics with greater or less distinctness, according to the positiveness of character possessed by them, or mental and physical conditions at the

time. As both parents contribute spirit and material force to form the incipient germ, so mental and physical traits of each are impressed upon it. "Every thing after its kind;" was the fiat of Omnipotent Force; and by this law. However, it no more follows from this that parents at conception impart all the germinal life that offspring must possess to insure immortality, or support them till the natural period of birth, than it follows that the seed cast into the soil possesses all the elements necessary to the unfoldment of the plant. The soil is a matrix that is the medium whereby elements, to assist complete germination of the seed, are supplied. It may itself be ever so rich in fertilizing elements, yet, something more is needed; etherial influences, sunshine and moisture, supply what is lacking but which is indispensable to the maturing of the germ.

Etherial influences — spiritual essences of the quality to form germinal mind, are what the embryo needs at the juncture described. These are derived from magnetic ethers of mind that are in proximity with the embryo at the time; being the emanations of spiritual beings, who, if they are of a grade to comprehend their whole duty, use special efforts to impel currents of their mental magnetism within the sphere of the mother at the critical moment, when the germinal being is ripe for attracting its additional germ of spirit force. Miracle of Nature! this spiritual germination of the incipient immortal! The brooding spiritual currents that are the heavenly influences to mortal human mothers of every grade during pregnancy, are those alone that are accessible to the embryo; from the fact that spirit guardians are those alone, who impel spirit-forces of the proper quality within the being or immediate sphere of the mother with sufficient force to cause them to penetrate to the sphere of the embryo, where germs may be seized upon by the forces of the latter, and appropriated as

mind-elements. It is the work of the spirit to effect this consummation, and he does it by virtue of his office as guardian; it being necessary for a guardian to enter *en rapport* with his charge, on occasions, which signifies, infusing his own magnetic ethers throughout the system of his subject. Intelligence in the higher spheres of life has fixed this law of guardianship, which implies so much for the race of man in this one particular use. No contingency can, ordinarily, occur to prevent the deriving of the proper quality of germinal life at the proper time; since the magnetic sphere of the mother is impregnated with the essences of her guardian's mentality, whether she be in a spritual frame of mind or not at the critical time; or whether she be of high or low spiritual or moral nature, from the fact of his constant attendance on her, and frequent impartations of his mental forces into her sphere. Guardians fitted to all in mentality,—is the rule; and every mother will derive a germ for her offspring, that will coincide with the character imparted by the act of generation. Frame of mind of mothers at the time, has an important influence in fixing the character of the germ; as she can, when in a superior spiritual state, attract higher germs than her immediate guardian can bestow—germs from the sphere of a spirit of higher grade every way, who will be in attendance at the proper time, to do what he can to impel his mental forces within reach of the embryo; or she can repel the highest germs her own guardian might supply, by being in a groveling mood. Woe to the child immortalized under the latter circumstances! but blessing will inevitably be the heritage of the other.

Fellow mortals near the mother cannot infuse through her being elements of the proper grade to supply the needed element to the germinal being. What are imparted by them are too material, or combine too much of material essence with the spirit, to be attracted to the

spiritual germ of the embryo; which, as will be understood, is a sphere of spiritual force by itself, which must be strengthened by an atom of Deific Force, to complete its individuality. Physical man supplies the highest essences of mentality from which the highest animals can draw germs for offspring, when man and his influences are accessible by brutes. When he is not accessible, magnetic ethers impregnated with mental essences from spiritual beings, supply this force to the material world. This is in correspondence with the law of life in every realm of the physical.

This particularizing on this subject, will make manifest a law, the most far reaching in its consequences; and, hence, of the utmost importance. The law is as fixed as the law of existence; and its requirements should be studied, like those of any law involving individual good. It is duty to proclaim through all the land, as far as men and women will heed, what pertains to generation that can be influenced by voluntary action on the part of parents.

It is as impossible for the maternal organism to supply spiritual essences to complete the structure of the spiritual part, the mentality of the embryo, as to furnish the material nutriment to feed the material part. It does the latter only as the medium through which Nature supplies nutriment to the unborn; and so the mother's spiritual constitution,—her mentality,—is the medium that is acted upon in the transmission of spiritual essences to complete the germ. The craving for nutriment, material and spiritual, by the embryo, is what attracts this to it. The stomach will crave food, and if it is not supplied, the body will consume away under the action of the forces of the system. So it appears that the attractive forces of the system have a language, and that hunger is that language; and that it bespeaks a real process going on within the system. When food is supplied, these forces

use it for the body. Now, the maternal organism is supplied from without with what will satisfy the cravings of the germinal being, ordinarily, without extraordinary phenomena attending; these only occur on the occasion of the quickening. This is an epoch when the germ has arrived at a stage when there is an extraordinary call for elements to strengthen the whole being; and the mother usually suffers in consequence. If she is very vigorous physically, and her mentality is well balanced, she may not notice the epoch; but it is accompanied by such peculiar phenomena that few mothers fail to appreciate it, in some degree. Attractive forces of the embryo search, through and through, the maternal system for what the being must have, and reach outside of that, and draw magnetic ethers to strengthen the fluids of the body. The embryonic brain having developed a capacity for the aquisition of spiritual forces superior to those it has hitherto possessed, draws upon Nature through the mother's spiritual organs, with a strength that compels these to draw upon forces outside of herself for the supply. The result of all this is, that the maternal nervous system is unusually affected, and the mind strongly operated upon. Sympathy of the physical and spiritual organism causes, in some cases, nervous prostration accompanied by hysteria; in others, physical ailments are aggravated, and indisposition results for a brief period, attended by mental perturbation of some kind. The variety of phenomena attending this period correspond to the variety of constitutions among mothers, and the varied circumstances attending upon it. However, whatever they are, the same causes have operated to produce them in all. The nervously sensitive woman, the spiritually minded, is the most affected at such periods. The praying spirit is sometimes aroused; and the Marys who have given birth to Saviors, may trace the origin of the superior spiritual endowment of a child, in their own spir-

itual mindedness at the *critical period* that conferred upon it the gift of a completed germinal life.

There is a philosophy involved in the production of superior specimens of humanity by mediocre parents, or such as are but little above mediocrity, that will go far to explain variation of species; it being by the law of improvement of species that this production is effected. There is a science involved in the reproduction of the race that should be understood; as it underlies all physical and moral training, and disregard or ignorance of it is fruitful of evil to mankind at large. The student who has followed carefully where the foregoing principles lead, cannot fail to understand what this philosophy, this science, is; yet it is well to call special attention to points in a discussion that signify so much as this one above named.

It is no mythical history, that of the Nazerene, who left his imprint upon the ages, and who lives in the faith of millions, the pure, the exalted, the spiritually-minded, whom to emulate in all the walks of life is salvation from the corruptions of the flesh. Neither is the history of multitudes of superior individuals to be questioned, who have, like Jesus Christ, lived above the spiritual horizon of their age, or like Newton, Goethe, or Shakespere, have surpassed their fellows in intellectual capacity. Their name is legion, who have been endowed above their fellows, and above their parents, so far as to have excited the superstitious credulity of the multitude, who have believed that the Gods descend, and condescend to mortal birth, when such prodigies make their appearance. To the mothers among the people, has been given the sacred privilege of invoking the spiritual agency that is powerful to assist in the bestowment of superior gifts upon offspring. Mary, the mother of Jesus, was in communication with angels, previous to his birth, who revealed to her something of what the character of her

child should be. Also Elizabeth, the mother of John the Baptist. Here is a key to the solution of the above problem. Spiritual-minded mothers, were these two, and they were also of intellectual capacity to have wise forethought for the offspring to which they were to give birth. Doubtless they were earnest and sincere in their devotions to heaven for them; and these devotional exercises were spiritualizing to those mothers, and had the effect to bring them in contact with such spiritual elements as supplied superior germs to their offspring at the quickening period. Superior spiritual beings respond to such prayers, from such women, and from their own mental magnetic spheres supply germs of mentality and spirituality for the embryos. They do this because the purity of spirit and the frame of mind of the mothers, make it possible. The law of magnetic attraction and repulsion decides that like seeks like; therefore, the unprepared mother cannot come within the sphere of the highly refined spirit, or receive the attention of so high a grade of spirits as the prepared one. Spirits, the ministers of the Most High, in their attendance upon mothers during pregnancy, make special efforts to excite spiritual emotions, and such a frame of mind as is consistent with the near approach of guardians of high order, that the supreme object of conception may be best served; viz., the conferring upon offspring of God-like attributes.

That God, or any class of spiritual beings, interferes with mortal conceptions and births, is almost a mythical notion among mankind to-day; nevertheless, as there is a Supervising Power in the universe, and hosts of Spiritual beings, whose it is to do the behests of that Power, there is such interference. God the Creator;—what does this signify? That no power exists in Nature above that of parents, to assist in the most important work of fixing the quality of the Life Principle? Faith, creeds, protestations of dependence on God, are all meaningless forms,

unless some real relation exists between the child and the Father above. Angelic powers have been recognized in all ages, as for the purpose of doing God's will with mankind; but at the present, so many deem themselves superior to any belief in what they term "the supernatural," that it has become unfashionable to recognize these, only in so general and unmeaning a manner as to completely nullify the belief. Heaven help the unbelief that shuts God so completely out of the sphere of mortal man as to hinder much good that might be done to him by reason of more faith!

The faith of mothers in the supervision of spiritual powers at the period, of all others, when she needs help, is a strong accessory to the efforts of these powers for her. Prayer,—heartfelt prayer,—is the arm that reaches to heaven, indeed, and brings blessings down. It lifts the suppliant up to meet the blessing that is ever held out for every soul. An immortal spirit conceived and awaiting the shower of heavenly influences that is to cause germination into complete individuality! Think of it, ye mothers in prospect! think what a duty is yours, and what consequences are to follow the neglect or acquiescence in this duty! Your offspring will live to bless or blame you for what your life was while it was yet in the incipiency of its being; for so God's law hath ordained from the beginning.

Cast the seed into the earth, and there let it rest, while the heavens are shut against the fall of the rain, the dew, and the sunshine, and what will be the effect? Stint the influences of these, withhold the timely shower, or moisture and warmth, at the juncture when the germ bursts its seedy covering, and what is the effect but death, or too feeble a life to serve any important purpose? Germinal life of the human embryo may fail of the purpose of individualizing an immortal spirit, or it may result in such an inversion of the perfect law of completing the germ as

decides the character of offspring to be low and groveling. The environment of mothers — the influences that act upon them at the time of conception and during the period of gestation, particularly up to the critical juncture, decides all this. The Neros, Calligulas, Atillas, and Tamerlanes,— those "scourges of God," that have served as the avenging angels of the earth defiled, or people oppressed, have been the offspring of such pre-natal influences, as to rehearse them would shock sensitive nerves. These have been like the pestilences which have often followed in the track of the devastators, that have arisen from the corruption of the sources of health and vigor, and which have served Nature's purpose of annihilating the conditions that gave them birth. Natural idiots, that are destitute of the elements of humanity, are examples of such complete inversions of this law as *rob offspring of immortality;* but confer a life that is as near akin to the brute as a human mother can give birth to. Accidents, oftener than other causes, decide such consequences; yet, there are others that intervene to produce such results, and they prevail in the lowest stratum of human society, where bestiality is prevalent, and mothers are no more than human brutes, and the ministers to depraved passions of the opposite sex. Savage tribes, that, in falling below the standard of natural humanity, have become depraved in their instincts, and corrupted in all that pertains to the moral nature, produce many non-immortals. Hastening on the sure path to extinction, one by one, individuals of a tribe arrive at the point that they cannot confer human life upon offspring, and so the limit of their existence is soon thereafter reached. Families among civilized and semi-civilized people, in the same manner, become extinct — to the shame of, so-called, civilized institutions, be it said. The bestiality that cannot be named or hardly thought

of, thrives in society by the permission that ignorance always gives to vice.

In stating the law under discussion, and defining the duties of mothers in relation to the well-being of offspring, it will be understood from what has been said on another page that it is not intended to convey the idea, that with mothers, at this one period, or at any period, lies all the responsibility in regard to forming the character of the germinal life; or that all depends on this one pivotal circumstance as to the character of the germinal life conferred, or the character the child shall unfold eventually. Influences surrounding the mother during the whole period of gestation, make their imprint on the character of offspring; besides, early education,— the mould, so to speak, in which the facile moral and intellectual character is shaped, has a powerful effect to deform or improve what Nature at first has formed as the basis of character. With a full understanding of all this, which most people in civilized lands possess, in part, it is of the utmost importance to look deeper into causes, and learn the law as to how improvement can be made on the germinal characteristics while they are in embryo, and the being be endowed superior to the parents.

In reference to the point just stated, it may be asked: How was conferred upon Jesus the character of Sonship to God, he is claimed to have possessed in an infinite degree above other men born of woman, and which he did possess above multitudes of his race. It is asserted that he was begotten of the "*Holy Ghost*" through an "*immaculate virgin.*" This is the idea of a superstitious age, that caught the inspiration of the truth from prophets, who, themselves, did not understand the law they were promulgating. It did not originate in the day of the Judean Reformer, but ages before; and had been applied to many incarnations of Sons of God, Buddhas,

or great prophets. The superstition embodied the true idea in an exaggerated form. *The "Holy Ghost" is the spirit that presided over the woman at the moment, and impelled of his own mentality into the embryonic brain, through the avenue of the mother's spiritual constitution; which was endowing the being with his own superior characteristics.* "God" was "manifest" in the Superior being that thus conferred of his spiritual essences upon the germ; and, hence, he was "manifest" in the character that unfolded like qualities. *"God" is "manifest" in every human being;* and upon every one he has conferred Sonship, by the same law; but not in equal degree. The Immaculate virgin was the pure virgin that conceived by a mortal man, and gave birth to a son so superior in character to most of his fellows; and she was an exception among women, only in her superior spirituality, and her purity of character. An aspirational nature, coupled with virtue, strict integrity, and good intellectual powers, forms a high character; and mothers of this grade will call around them such influences as cannot fail to bless their offspring.

In the nature of things, it is rarely that offspring are on a plane far above the parental. Exceptional characters, like Jesus, are the product of peculiar circumstances, which only occasionally repeat themselves. Yet, this does not change the principle illustrated so strikingly in his conception and character. The race is to be improved by practising upon this principle; for in no other way can it be. Spiritualize and educate the mothers, and society will be correspondingly elevated. Heaven comes down to earth through the spiritualizing influences of elevated woman, truly.

Circumstances sometimes combine to cause a great character to be marred when it is in embryo, or to lack the high moral traits of a Jesus, while possessing others equally exceptional. For instance: The mother of the

great Napoleon had been highly wrought upon by political events; her character was better fitted to the mother of the warrior and statesman than to the spiritually minded teacher. Hence, when highly psychologized by passing events and care for her unborn offspring, she attracted for it a germ of highest character, intellectually, but wanting in some vital points of moral, or spiritual character. Circumstances unavoidably controlled the Spirit in the effort to seize upon the favorable condition of this highly qualified mother, to implant a high order of life in the germinating mind. So intricate is this law, so pliable, and subject to circumstances, and yet so fixed, so all-controlling!

Spirits are but fulfilling their legitimate functions when they thus act as the arm of Creative Power in assisting in the completion of the being of immortal children. Power is concentrated in them for this very purpose, to carry on creative action — power derived from the Supreme. Intelligence is Nature's powerful arm in every field of labor. On former pages has been explained how development progressed before individualized spirits were developed, in the present order, to aid in all development. Here it is shown how effective is this aid in the most important of all evolutions. The evolution of the human through animal species is assisted, as the evolution of a perfected spiritual principle is, by spiritual agency. Before man was, in the evolving universe of forms, when there were only the magnetic forces of highest forms of physical Nature and a diffused aroma of spirit, to co-operate with Deific Spirit in creating the order of germinal life necessary to institute the immortal spirit, instinctive forces were stimulated, and re-stimulated, again and again, from the Deific Sphere, for the accomplishment of what is more readily done by lower orders of intelligences, in the present order. Stimulations from a plane so far removed

in quality of force, was reaching over an infinite abyss by a Force that nothing can circumvent, because Omnipotent; but which, nevertheless, always operates within the boundaries of laws well defined. Hence it was, that an eternity only sufficed to accomplish what a single age effected when Earth was peopled by man. How mighty a force man is, existing in a universe of graded spheres, related, the one to its next lower and higher, like the links of a chain, is thus clearly revealed!

The extraordinary effort Nature makes to unfold a higher species through the means of the lower, is exemplified in the evolution of superior specimens of humanity through ordinary parentage, as has been described. This latter process is improvement of the species carried to its climax, as it were, by special effort. It is going beyond the ordinary level of the species, when conditions favor this step in advance. This is according to the law of progress of species up to the point of culmination, and to the farther point of evolution of typical traits of higher ones. This principle of improvement to the extent Nature allows, in the formative era results in new species when the opportune period arrives. It is the longer step in advance, made when the occasion offers; intelligence ever being the organizer of effort to the end of bringing about the results. Spirits combine their efforts, as legitimate forces of Nature, to aid in the work of evolution of new species, on planets where man does not yet exist. They have power to do this through the magnetic ethers that surround animals. They congregate in numbers as near as possible to the locality where the higher individuals of parent species live, and by force of will impel the highest elements that can enter into the mental constitution of the species that is to be, into immediate proximity with the mothers, so that germs of highest possible grade can be seized upon at the right moment. Men, unwittingly, bring this law into active

operation when they mingle with their domestic animals, upon which they are experimenting in improving breeds, etc. Their own presence near their charges, is an element in the process that is least noted, and is yet of great importance.

So extraordinary, and supremely important an event in the progressive development of surface forms, is the evolution of the human species, that it calls forth all the effort on the part of Spirits that can approach a planet at this stage, that will avail to aid the process. The interest of the "Heavenly Host" is concentrated on the world that is in labor for so mighty a birth; and if the angels watched for the birth of the Babe of Bethlehem, and sang songs of welcome at his advent, so they do at the advent of the First Parents — the infant race, that is what that babe was — "God manifest in the flesh." When mankind learn more of the law of Spirit control, they will better understand how it is possible for disembodied intelligences to psychologize human mothers at the critical moment when the breath of God is to be breathed into the germinating child, and animal mothers, at the auspicious period when the germinal life is ready to receive its baptism of higher essences that shall constitute it human. That animals are susceptible to such psychological influences, is abundantly exemplified in history. It is ordinarily a low order of spirit intelligences that come in sufficiently close contact with animals to exercise this power, but they are of a class that, with strong will-power, unite intelligence to co-operate for the end to be attained. The high orders use the lower (when these are in existence) as instruments whereby to obtain control where their own individual forces can operate more readily through them as medium forces. It is the Deific Creative arm extended through medium forces, all the way down from the extreme hights where Perfected Intelligence exhibits its attributes upon the

most etherealized grade of material magnetic ether. "Jacob's ladder" reaches from this plane to the lowest possible grade of material substance, where the gross electric fluids are vitalized by magnetic life, which is the link that unites a material universe in chaos with the Intelligent Formative Force thereof.

The law of evolution of species is one; and what has been said relative to the human species, its evolution, its pliability, will apply to all animal species and types. Natural selection, sexual selection,—modification by whatever means,—effects the changes necessary to bring about evolution of new species through the instrumentality of the old; but never the transmutation of the old into the new, according to the accepted meaning of terms. The inferior serves Nature's purpose as the matrix which is to bear the superior. It gives of what it has to the offspring that is to transcend it in the scale of being, but that is not what is to constitute its specific character. The change is a radical one, from the typical parent to the new form; and there is no possibility of mistaking an evolution of a new, for a transmutation of an old species, by those familiar with the anatomy of each, where a comparison of individuals of the two can be made. The examples of comprehensive types are abundant, and furnish naturalists with evidence, which, coupled with that drawn from other sources, is sufficient to establish the true theory. Agitation of the subject will elicit more light; and whatever may be the dictum of doctors of divinity or doctors of science, the truth must reveal itself in the glare of the present spiritual age.

What pertains strictly to the development of the race is treated in the next chapter. In bringing this chapter to a close it is appropriate to refer to the next for the further illustration of principles set forth and exemplified, to some extent, in this. The careful reader will

wish to follow the line of development of the human race, as it can be traced by an application of the principles of Nature that have operated in the unfoldment and regulation of all other conditions of the planet up to the present stage. To trace this line will now be attempted.

CHAPTER VIII.

THE HUMAN RACE — AN OUTLINE OF ITS HISTORY IN PREHISTORIC TIMES.

THE HUMAN RACE — ITS EARLY HISTORY — EVOLUTION OF ARTS OF LIFE — EVOLUTION OF LANGUAGE — CIVILIZATION AND GOVERNMENT IN ANCIENT AGE — RELIGION IN ANCIENT AGE — AGE OF DECLINE — THE DELUGE — INFLUENCE OF RACE ON PLANET — EARLY HISTORIC AGE.

IN each of the foregoing chapters principles and facts are stated that are, in a measure, introductory to this, and which apply particularly in the discussion of the subjects to be considered. In resuming the subject of the origin of the race, it is appropriate, for the sake of making this chapter complete, to summarize a few facts that have been stated in connection with other subjects that have passed under review.

The use of mankind on the earth is to aid in the development of the planet. Humanity, in the image of Deity, serves as the arm of Creative Power, and, more and more so, as grades of men attain the ability to apply law in whatever is to be done. The human race was the product of three animal species that had verged on to the plane where they could embody in offspring the human faculties. This consummation was effected through the law of evolution, the law through which all that is in the universe of forms came into being. The race was originally of one species, according to the technical signification of the word species, but of three distinct varieties, whose purpose was to interact for promoting each other's

progress. From this brief summary the history continues as follows: Of the three varieties two were more nearly allied to each other than to the third, whose distinctiveness from the others was more plainly marked by racial characteristics than was that of the other two from each other. The relation between the three varieties was as follows: The distinct type sustained the relation of negative to both the others, while of these, one was negative to the other; — a positive, an intermediate, and a negative — the relation between the three being the same in principle as that between the three distinctive principles in the trinity of Nature, and serving a similar purpose. There were two distinct centres, widely separated, where the three varieties had their origin; the two nearly related ones originating in separate districts of the same geographical centre. These centres were where the superior forces of the planet concentered for a long period previous to the evolution of the race, in consequence of favorable circumstances; as of situation, products, etc. Conditions in the two widely separated centres were widely different; and this diversity impressed itself on the races. The positive branch of the race was white; its nearly related variety, the intermediate, was also white, with characteristics which are now exemplified in the Mongolians of the superior types; the negative branch was black. The latter originated in Central Africa; the other two in Southern Central Asia. Thus the race of man was, at first, a unity in duality, at the same time that it was a unity in trinity. The plan was as old as the universe; being that by which all things exist.

The Intelligence that supervised in the evolution of the race had so ordained that this must be accomplished in the two centres, and in the appointed way. Progress had tended to this result. Nature bloomed and developed its fruitage of superior conditions and products in the gardens where the race was to appear, in such un-

wonted luxuriance, as to hasten the climax of formation in these localities; to fix it in these alone, while the remainder of the surface yielded up its choicest elements to fructify these centres. The balance of force was here, perforce, from the time when the highest types of the Animal and Vegetable Kingdoms took deeper root here than in any other sections of the planet; which was the case soon after the Glacial epoch had renovated the general conditions over the whole surface. In the course of events, certain districts became more favorably situated for progress than any others, and henceforth, they took the lead in progressive development, dispensing high elements to the other portions, and deriving from all, in exchange, the highest they had to yield. This was by an inevitable law; but results were stimulated and intensified by the interposition of Intelligent Powers. There was a limited amount of force of the proper quality to be expended in this highest evolution; and it would determine to the locality where its affinities attracted it, as a matter of course. Diversity of Elements of different Zones, the Temperate and Torrid, decided the preparation of two centres, and the diversity of the three varieties of the race. From these centres people diverged like divergent forces from central suns or from any form or quality of matter that yields superior elements that diffuse themselves for the use of inferior forms or substance. Remote quarters of the globe not being prepared for man when he made his appearance at these centres, his influence emanating from thence was an efficient aid in hastening on development over the surface. Magnetic force of superior quality to any heretofore developed was thus provided to stimulate germinal essences, and impel progress in every department over the planet. The evolution of the human race under circumstances that indicate such supervision of the Heavenly Powers, is a demonstration of the truth, that Nature is a co-worker with God; and that all

laws are the instruments wherewith the Supreme compasses his designs. If man was the object of such care in his birth and surroundings, the progenitors of the race must have shared in this solicitude; since so much depended upon their welfare. It is sufficient to say, in regard to this, that the instincts of the ancestral type, as the three ancestral species may be termed, were stimulated and strengthened above those of any other animal type; this one being inherently superior to any other from the period of its inception. The mothers of the human race were prepared females of their type, few in number compared to the range of the prepared branch of the species to which they belonged, which was as broad as the district comprising the ancestral domains; and they were scattered throughout the whole locality. There was method in this, also. Near blood relationship between the first individuals of the human type was thus avoided; which was a circumstance of the first importance as regards its starting out under favorable auspices. The first parents were few, and distributed over an area — each variety — sufficiently broad to furnish support to the new type while it should be unfolding its powers preparatory to commencing migrations into surrounding territory, and also to serve the purpose of its dividing up into separate communities, as its instincts would prompt it to do. The conditions of its perpetuity were provided previous to its birth, by such an orderly method as could not fail of its purpose. Families of the ancestral type whose instincts were highest, naturally kept aloof from the others; this was especially the case with the mothers, who, in the care of their young, sought the localities which were least frequented; where they could, undisturbed, secure the richest fruits for their offspring. In this manner, a sort of aristocracy was kept up, until the children of the new race had been born, and had assumed, by right, the highest place. The evolutionists of the Dar-

winian school would say, that this instinct of the parents was perpetuated in the offspring, intensified by the force of surroundings into human instincts — that the first intrinsically human beings were the progeny of half human parents, and had grown into humanity by the unfoldment of their faculties through favorable circumstances; as a species in the present day develops higher character. The first human children were *human from birth;* and the offspring of animal parents, that had approached the verge of humanity so nearly, by the law of improvement of species, as to be able to draw human germs for their offspring, as has been before described in detail. The line between the animal and the human was never obliterated in a single case, as it could not be, by any law of Nature. The ancestral type rapidly declined, after giving birth to its human progeny, while the latter, from the first, displayed the human nature that was theirs, in their superior intelligence and ingenuity, in the instincts that prompted them to associate distinct from the parental species, keeping themselves aloof from them, and choosing mates from among themselves, except in rare cases, where the human was dominated by the strong animal nature.

It has been a question with ethnologists, whether the race originated in numerous centres dispersed over the earth, like animal species — which view has been favored by eminent observers — or in one, as is indicated by revelation, in the Hebrew Scriptures and elsewhere. This is a problem deserving serious consideration, as there are phenomena pointing to both theories as the true one. The theory of evolution, which makes the human race the offspring of the animal, would seem to favor the idea of the derivation of the different existing types of men from the centres where these types or races are found; where conditions develop racial peculiarities in men, as well as the distinctive characteristics of ani-

mals; the one conforming to the other. On the other hand, the evidence in favor of the theory here presented as truth, and revealed in part, in allegorical teachings of ancient seers, when it is summed up and closely scanned, is such as to carry the weight of demonstration to the logical mind that is unfettered and unbiased. The first factor in the problem that demands attention is this: Man is intelligent, and, when in possession of his natural energies, is possessed of the propensity to rove; and having these two qualities as basic elements in his character, he must needs have put them in use from the moment when he had passed out of his first infantile state, and had become, in some degree, conscious of his powers. The second, and which is an equally important factor, is the power which man possesses to adapt himself to every clime, every Zone; to all possible circumstances where chance, destiny, or choice, may place him. Intelligence develops this power, it is true; but there are few tribes so unintelligent that they would not adapt themselves to a locality where force or inclination had placed them; the necessities of their situation arousing their dormant powers, and forcing the exercise of ingenuity in combatting with difficulties. Necessity has been the great prompter of progress of the race; and had it been possible for the first parents to have remained in their Eden with their offspring, a few generations would have marked the lifetime of the species. The effeminacy of nations and families that is the sure result of inaction and luxurious living, is the decay which is the precursor of extinction, unless saving means are applied in season to avert the calamity. In the order of human progress, the means have been various, and strange and startling, that have served the purpose of perpetuating the various branches of the human family. "The Lord God," the ancient seer has it, interfered and drove the family of man from the "garden of Eden."

The same power, it may well be believed, impelled it to that degree of activity that would save it from destruction, through all the early ages of its existence, when it was like the infant, unable to judge and act wisely for itself.

Emigrations stir the life elements of men, vitalize all their powers, provided lands are occupied that possess the requisite qualifications to be fit for human occupancy; and also, provided emigrants have the natural energy to react upon their locality with good effect. Had it been the order that human centres, like animal, were distributed, at first, over the habitable parts of the planet, emigrations would have resulted in extermination that would have depopulated the earth of its most necessary human elements; for it has ever been the most energetic, the most capable and worthy of living and propagating, that have sought homes far from the parental centres. Nature would not have it so, that when the early families scattered from the paternal domain,—wives and little ones as well as strong men,—they should encounter the danger of extermination by coming in contact with other families or tribes, that held the right of pre-occupancy of the lands; there was too much at stake to resort to such questionable means of stimulating the energies of mankind. Men did not develop the roving disposition until they had attained "the knowledge of good and evil." They "ate of the tree of knowledge," and began to exercise their ingenuity, and displayed propensities to evil as well as to good. Then the mandate of their being was; "Go forth and explore the country round about, and take what you find for your own; kill if necessary; ape the animals that slay that they may eat, regarding the gratification of self as the greatest good." They went forth, safe from molestation from any of their kind, but subject to dangers and disquietudes that were a perpetual spur to their awakening

intellects. The thoughtful guardians of the dependent children of men guarded the entrance to the bowers of ease and indolence, with the "flaming sword that pointed every way," to warn them from a danger greater than hunger or cold, nakedness or prowling beasts of prey.

The third factor in the problem under discussion is the principle upon which Nature is always observed to work in bringing about her orderly evolutions; viz., The economy of energy. There is no waste of force in all the universe of life and labor, as far as can be discovered. Utility with Variety, is the universal order. What departures from this law of economy man discovers are in his imagination, or are illusions that result from ignorance of the uses of the variety of processes observable. The earth was the inheritance of the race of man, by virtue of the powers he possessed, through which he was to lay hold of his birthright. It would surely have been a waste of energy to have created men in numerous centres, when the very conditions upon which the race could be perpetuated depended upon its liberty of expansion from few centres,— its liberty to grow spiritually, intellectually, and physically, in the only way it could; that is, by the exercise of its natural powers and propensities, which impelled it onward and onward still, to conquer and enjoy the fruits of conquest. The instincts that would not be restrained must have scope for exercise; and this exercise must be for subduing the earth for man's occupation, and for multiplying the species and replenishing the waste and unoccupied territory with a human population.

To place man on the level of the brute that lives only his little day for the purpose of satisfying his physical appetites, his energies being confined within that narrow compass, and denying, in effect, the intelligent purpose that wrought in man's creation,— the purpose that assigned him his faculties for Nature's use in helping to

subdue the earth, and making those parts habitable that could not become so without his influence, and gave him the work to do to develop his inherent powers,— is to belittle him beyond measure; is to deny to him the powers that are his, indisputably, and to Nature, the designing Mind that originated creation for intelligent purposes. That is a shortsighted philosophy that accounts for progress without giving a place to design, supervision, or the instinct of mind in natural operations; or that makes Nature a vast machine that, being once in orderly motion, is always so, by virtue of the laws that govern it, without the intervention of intelligence to stimulate its forces, or put in operation laws that will impel progress. Man on the planet interferes wherever he can; and his interference is productive of results as wonderful as any produced without him in the world he inhabits; although they may not be so varied. When revelation affirms that God placed man in the garden of Eden when he created him, where every thing necessary for his support was at his hand, and then drove him from this paradise when he had acquired a knowledge of good and evil, it states a proposition that is philosophical, because consistent — according to well established principles. What is necessary is to strip the record of its allegorical character, and show why the Supervising Power brought about these things; to show that there was motive in the direction events took, and a stern necessity that impelled it. The motive that has been assigned to Deity for expelling the first parents from Paradise, after they had availed themselves of the fruits of the "tree of knowledge," bespeaks the benighted state of the minds that compiled the old writings, and supplied from their own brains the "missing links," making a chain of material as diverse in its separate parts as clay is from beaten gold. A humane father will not bring children into the world and leave them in their

infancy and helplessness to take care of themselves. As surely as there are angelic powers that serve in the kingdom of the Most High, so surely they cared for the race in its infancy; stimulating natural propensities, and shaping the direction of events as they could, and the revelator was inspired with this truth, and gave expression to it in language that could be understood by the people he addressed. Every age has its revelators; and there is not always the need of going back so far into the past for truths that inspiration only can reveal, as to find them so beclouded and dimmed by the dust and cobwebs of ages of ignorance and superstition, as to be undistinguishable from the grossest errors. The habit of doing so, which people have acquired, is at the foundation of much of the unbelief that the religious world deplores.

Familes took their rise early, which were the seeds of communities that kept themselves aloof from each other from selfish motives, as the possession of their own chosen localities, and the impulse of affection for their own. Communities were not isolated from the occasional companionship which favored the choosing of mates from among neighboring communities by those whose instincts prompted it, thus keeping in operation the law of intermarriage that is at the foundation of the stability of the race. There was a selection of the fittest among the early human children; for not all of them were qualified, in every respect, to propagate the elements of stability; and so some families became extinct, through deterioration; while others developed strong vitality and superior instincts and intelligence; which were propagated into communities as effective elements of progress; and others lingered on the plane of mediocrity. Thus was created among the little circles of human inhabitants of the home domains, the conditions necessary to the

progress of the weak and the strong. The reactions in human society which are so vital to its progress and its very life, began thus early in its career. The commingling of the miniature tribes and nations formed before the intermixture of varieties and branches had begun, portrayed the effect this would have when expansion and increasing activity and intelligence should bring it about.

The instincts of the race, at first, were monogamic. The ancestral type developed this instinct, in a good degree, from the habit of isolation some families practised, and the human progeny inherited it intensified by their superior spirituality. Departures from the habits and practices of the first generations of the race, occurred as the natural consequence of the unfoldment of their faculties; which, as a matter of course, did not always keep the even balance consistent with a just observance of the higher laws of their being, which were but in their incipiency. What was of the first importance was the development of strong physical constitutions by the prospective parents of the future race; and whatever would favor this was lawful with the early men, who were too unspiritual to comprehend moral responsibilities. Conscience was an after development. One has said: "God made man upright, but he has sought out many inventions." His uprightness, at first, may be compared to that of the infant that knows not to do wrong; that follows its instincts, which are Nature's language, and hence, good. His departures from this state were like those of the child that experiments every where and in every way, to learn, to discover what he can do, and to make himself conspicuous among his fellows. The "many inventions" he has sought out mark his path from the state of infantile weakness and ignorance to mature manhood, and by no other route could he have attained the goal.

The legend that has come down to the present age con-

cerning the Paradise of Eden, and the purity of the first parents, has its foundation in truth. "Eden," or the domain where each race was born, and where it passed its first infantile stage, was a paradise, if luxuriance of production of all that the helpless race needed to subsist upon and to make life pleasant, constitutes one. The first men were possessed of the human instincts unalloyed by base human passion. What was beastly about them was derived through a type of animals superior to any that man on earth now knows. This type was not ferocious, except in defence of its own; its intelligence prompted to almost human supervision over families, individual rights, etc. Docility was a prominent characteristic of the species; and the human children inherited it, combined with their other faculties, in such proportion as to modify selfish propensities, and cause the character to savor of the innocence and purity that has been attributed to the first parents in Eden. Savagery took its rise among men, however, early in the life of the race. It was a natural consequence of the perversion of the faculties by excesses and marked decadence of tribes as surely as it does at present.

The human race was developed on the same principle as animal species had been. The first families took their rise at an intermediate point, it may be said, with propriety, between the lowest and highest branches as they afterwards appeared. The lower were evolutions on the downward grade, and the higher on the upward, as with species in the Animal Kingdom. This principle must be borne in mind as fixed, in respect to evolutions in every kingdom, every department, of Nature. Decadence is as natural under the proper circumstances as progress; and it serves, sometimes, as a means of maintaining the necessary relations of things. The early tribes of men were diverse as naturally as species of the Animal or Vegetable Kingdom; and the reactions which resulted

from this diversity, proved the strength and stability of each. Some succumbed in the battle of life; as has continued to be the case in every age since; and some secured an ascendency which they kept until nations were developed by them, through accretions; as suns are formed from centres of force. To "overturn, overturn, and overturn," was the method; and so strengthen the unity of races, nations, societies, and cast out the uncongenial, or gross elements, that would conjoin or dissipate themselves according to their affinities, and formdisturbing elements to the stable societies, while they were able to maintain an existence. The march of time has been over ruins of peoples — tribes and nationalities, a vast multitude; each of which made its indellible impress on the age in which it lived, and, through that, on every succeeding age; serving an important purpose in some relation in the human panorama, whose lights and shadows, thrilling and picturesque scenery, terrible traceries of crime and depravity, are outlined and infilled by the crowding multitudes that appear to make their mark and are gone; a lengthened procession, until the whole scene closes.

The brief outline of early human history contemplated in the plan of this chapter, allows, simply, of brief mention of the most important principles and events illustrating them, connected with the early development of human society. Readers can trace for themselves the probable line of progress of the whole race, and the various branches emanating from the first centres, if they understand the principles that underlie this progress from the outset. To make these more plain it is important to state, in this connection, a few of the leading events that were prolific in most important results to the whole family of man and every individual factor of it.

It has already been stated, that the evolution of the three varieties of the race were coincident events. The

Eden of the white race was subdivided into two minor districts, each of which was the home of an ancestral species, whose human children were diverse — those of one species from those of the other — as varieties of two nearly related races are, which occupy different but adjoining sections of a continent, whose diversities of climate, products, etc., are engrafted on the people, making them distinct. In this case the diversity was sufficient to cause, on their coming together, a stimulation of the energies of each. This meeting occurred after the more energetic branch had developed the roving propensity sufficiently to leave their old retreats in search of new ones, and to satisfy a curiosity that had been aroused with the awakening faculties. The habits of the two families were nearly the same until just previous to their contact. The weaker had ventured on the experiment of using animal food. With carnivorous instincts, these two weak children had both, until a short time previous, refrained from *killing* to satisfy the demands of hunger. The fruits of the earth that grew in such tempting abundance spontaneously, had become the sole food of the ancestral species during the time when they were becoming spiritualized preparatory to ultimate culmination; and the progeny had, so far, followed the example of the parents, with whom they associated, for a season. This surpassingly wonderful provision, whereby the mothers of the race became susceptible to spiritualizing influences, and thus were able to attract human germs to their offspring, produced the effect that would naturally be supposed to follow from the use of such unstimulating diet for a few generations. It caused the race to be effeminate, in a degree. The loss in physical energy was overbalanced by the gain spiritually; which was an overleaping of the boundaries of type, and emerging on the plane above the whole lower creation, in offspring.

This abstinence from the necessary stimulating diet

could not be permanent and the race long survive. There was needed more physical energy, and at whatever cost, it must be gained. The blood-thirstiness that would follow the practice of killing to eat, would react upon the race itself; and besides, a greater amount of animal energy would be debasing in the degree in which it tended to overmaster the spiritual instincts. Nevertheless, there must be a reaction from the semi-imbecile state, that condition of "innocence" that resulted from a partial obscuration of one part of the nature by another, and the true balance must be gained, by degrees, through the gradual unfoldment of the faculties. The ordeal of experience was required to bring out the human powers. "Eve," or the weaker community, first ventured upon the experiment of tasting what had, hitherto, seemed like "forbidden fruit," to these novices in the philosophy of diet. With longing eyes, both had viewed this tempting fruit, and the more impulsive of the two, without counting the cost, ate at the suggestion of an appetite that would not be appeased without it. "Adam," or the stronger community, partook at the suggestion of the other; and the departure was made that set both on the track of permanent progress. The "fruit of the tree" was efficacious in opening their eyes to the relations of things; and they grew in knowledge and in strength. Their instinct of delicacy was aroused, and they clothed themselves at the dictate of modesty. Thus the ancient allegory taught; which, as handed down to the present in the Hebrew scriptures, is so garbled, and its consistency so obscured, as to be scarcely distinguishable.

Intermixture of the positive and negative elements of this higher type of the race resulted favorably to both. They multiplied and peopled the whole original domain, and spread themselves over the continent westward towards the "Eden" of the black variety. Many centuries elapsed between the several well-defined stages of pro-

gress of these early people. Forces were sluggish, and the race was laggard in its upward career; yet, there was progress; and the passing centuries were full of hopeful signs, that pointed to the high destiny of the youthful adventurer, toiling along in waiting for a yet more decided onward impulse, that would be given when the positive type came in contact with the negative.

The starting out of the race to occupy and cultivate its heritage, was like that of the pioneer who enters the forest to subdue it and make the land habitable for himself and his progeny. He builds his lonesome cot on some sunny slope, and from this centre proceed the forces that ultimately subdue the wilderness and make room for those that come after him. His very presence is a power to tame the wild. The dreaded beasts fly from him to give him room, the instinctive dread of man developing rapidly; the grass springs up under his feet, as though there were an affinity between it and him; the wild birds gather around his homestead, as if delighting in his presence; and the timid denizens of the wood crowd his hedges, and under the cover of his "vine and fig tree," as though he were designed their protector from the more voracious beasts, and as a sort of caterer to their wants. He makes room for all that is useful to himself, and, in doing so, ministers to the good of, and helps to perpetuate, the useful species of the Animal and Vegetable Kingdoms. His work is for himself and his kind, and for all Nature besides. The thorn and the thistle, the ravenous beasts of prey, given the full range of their instincts and their powers, would root out the more tender, refined, and useful products of a country, were they allowed unlimited power of expansion. Nature provides checks to the growth of such species; and none are so powerful as man, who, by his genius, his skill in devising expedients, and above all, by his Magnetic force, holds the reins of government over the whole domain of

the inferior world of forms, and conquers and exterminates the useless to give place to the useful.

The earth was before the infant race, to be conquered by the forces it should develop. The force to finish up this its habitation, was to be developed by the race. This was the most economical means to bring about the great end that could be devised, considering all the circumstances; as has been shown. Like an Alexander, it went forth to conquest in small force, but equipped with the inherent energy of character that would insure success; and gathering strength as it proceeded; until the earth was at its feet, and it looked skyward and into the innermost recesses of things for other worlds to conquer.

The African "Eden" was where torrid heats developed, with a luxuriance of tropical products of highest varieties, elements that decided the characteristics of the Negro race. This race was marked for the tropical latitudes, from its birth; where it can flourish despite the miasms of marshes and jungles, that are so apt to be fatal to white explorers. The place of its birth was where poisons lurked in every breeze; where they were exhaled with the dews and vapors, in the odors of flowers, and the emanations of vegetable and animal life, every where. The subtile essences of this character that pervaded the locality, as it were, poisoned the sources of life; or in other words, engraved themselves upon the character of the human species there; causing it to be sluggish in intellect, less sensitive to developing influences of every sort, less energetic, physically and mentally. It was negative in the truest sense, from the fact of its relationship to the prevailing conditions in its birthplace.

The high order of elements in the torrid zone is negatived by intrinsically low ones, such as are eliminated in undue proportions from matter, by the force of the

sun's heat. These latter have the effect to degrade, to a certain extent, all other elements; and, consequently, the higher orders of life developed there. The orders of life, animal and vegetable, whose peculiar function it is to absorb this grade of elements, are numerous, and serve the purpose of refining and uplifting them; yet, they are themselves the dispensers of effluvia that degrade the earth, air, and water; and make life a horror to every thing refined and spiritual.

To breathe the air of a continent infested, as tropical Africa is, and has been since the ancestral type of the black race originated there, with voracious carnivores, reptiles and serpents of every grade and variety — a hideous fauna, whose presence is infection, is to imbibe elements detrimental to a high intellectual, and an energetic physical development; it is to become a factor in the prevalent conditions, whose office is to interchange essences with all other forms, in greater or less degree, directly or remotely. Hence it is, that tropical latitudes are so unfavorable to the advance of civilization, or the perpetuity of the vitality of civilized and energetic people. The zones of intellectual strength and energetic physical life, which signifies, the zones that include the highly civilized and enlightened races and nations, are marked by the tropics and polar circles, being fixed by climate and its attendant influences.

The Negro race partook, from the first, more strongly of animal characteristics than the white. There was not so complete a separation from the animal plane, in many respects, with this as with the latter race; which fact is evidenced now by the animal features and instincts of some of the race. The human plane was reached, however, and progress on that, eradicated the more prominent ancestral peculiarities; but not so completely, or in so short a time, as in case of the other race. The history of this variety as far as it is known at the present day,

is in exact confirmation of the principle upon which it was developed, and upon which it has advanced and reacted with the positive race. "A servant of servants shall he be to his brethren," was the prophecy of the nature of this weak and dependent child. There could be no revocation of the sentence, since the stronger developed strength and will beyond all proportion with the weaker, and its overbalancing energies were destined to control wherever it willed to do it.

Going out from "Eden" and wandering in the direction of the brother race, after men had "multiplied in the earth," the "sons of God," which were the white race, came in contact with the black race and intermarried with "the daughters of men,"—with the blacks; and the result of this intermixture was a race of "mighty men." The allegorical statements of the Hebrew scripture above quoted in part, had direct reference to the intermingling of blood of the two distinct races after they met. The original meaning has been obscured by interpolations; but the prominent idea is there still in clear light. The ancients regarded the distinctions of race as of divine origin; and to distinguish the superior race, the seer called its children "sons of God." The daughters of men were "fair;" which means attractive; this has reference to sexual attraction, rather than physical beauty. The lascivious daughters of the race, that Ham is imperfectly made to represent in scripture, and whose character is portrayed in his treatment of his father, exerted their arts to seduce their visitors, and succeeded. The issue which resulted from the union of the two diverse varieties was a race superior to the lower—"mighty men, which were of old, men of renown." The legend comes down exaggerated, as is always the case. "Of old," is exceedingly expressive in the narration; for it suggests, that when the compilation of those old scripture writings was made, the tradition of the foregoing

event was old; that the revelation was a fragment handed down from a period in the remote past; which was the case.

Setting aside the old narrative, the truth is apparent, that the intermingling of the races produced another, diverse from both; superior to one and inferior to the other, of the parental types. Here was the origin of the intermediate or mixed varities of the human race. Originating in Northern Africa, where the whites met their colored brethren, the first type of this class was very dark, with strong Negro characteristics. The climate and other conditions of the country determined this. Intermixtures continued from this center, and branches took their departure from there and settled in other parts of Africa, in Southern Asia, and finally, in the islands of the ocean and on remote continents. The foundation of the distinctions in the several varieties of the mixed race was the diversity of the parental types, the proportional relationship of each and all to the two original types; local conditions, manner of life, etc., exerting a powerful influence in modifying and fixing characteristics.

The first effect of the contact of the original types, was good; and this effect was propagated through the ages. The reactions of the positive and negative elements of the race here commenced in earnest; and the result was a strong impulse to progress of both. The positive type languished for excitement,—something to arouse and call forth its powers; while the negative needed the prompting to activity, that could only be given by positive humanity,—a people whom they could pattern after or serve, and by this means acquire arts superior to their own. The first sentiment that would naturally be aroused, on the meeting of the two, was curiosity. This would lead to interchange of civilities; and, perhaps, to hostile demonstrations on the one hand, and servile acquiescence on the other. The natural relations of the

races intermingling were soon established; power asserting itself, as is ever its wont, in oppressive exactions, or mild government, that served the weak and strong alike. The servant then bowed to the master; and the badge of servitude was accepted, to be worn through ages of conflict, of oppression, of slavery; but to be relinquished, in part, by degrees, when the race had emancipated itself from the depths of depravity and ignorance, and approached the plane of the higher sufficiently near, to share with it civilizing agencies, and acquire the manhood that mental culture confers on human nature.

Together, it was requisite for the two, for a time, to pursue their way; that the weaker might lean upon and learn of the stronger. Mentality was of so low grade in the black race that it must needs, for a time, be under the influence of the white. Servitude to the latter was preferable to isolation, inasmuch as it answered the purpose of spurring on to action the dormant energies. A branch of the white race once in possession of the country where they encountered the black, retained possession for a time, sending colonies over the continent, from time to time; each and all taking in their train servants and concubines of the black race; thus sowing the seeds of the mixed race as they went, and peopling remote corners of the continent with it. The enterprise that was awakened in the North of Africa, spread itself, ultimately, over the globe; for migrations did not cease from this time onward; being periodically stimulated from new centres; the tide acquiring force at every flood.

The return emigrants of the white race, that turned their steps towards their native domain, after exploring the new country, and making the acquaintance of its inhabitants, carried with them seeds of this enterprise, which germinated among the tribes of the race that were left behind, that were scattered over the country from Southern Central Asia to the Nile; not continuously, but

in sections where a population of men could easily maintain themselves; and these were thickly peopled. The gregarious instincts of men prompted to the centralization of population where subsistence was easily obtainable; and these becoming overcrowded, families separated from them, and in colonies went in search of new and fertile lands.

The simple arts that the race practiced for thousands of years were those that the untutored races now practice; these being learned by slow degrees. The art of agriculture was long in being learned; the spontaneous productions of the earth were the reliance of men for ages after they appeared. The fruitfulness of the lands they occupied, the prevalence of game, sufficed to supply their simple wants until necessity prompted the domestication of flocks and herds, and to experiments in grain and fruit culture. In their wanderings, the tribes observed and learned of Nature; their thoughts taking form in experiments of various kinds, which ultimated in discoveries of vital importance. The simple brain that conceived the first implement of husbandry or cookery, had achieved as much for the race as the inventor of the steam engine. It had taken a departure from the old trodden paths, and the novelty of the thing elicited wonder and admiration; and, best of all, emulation. One step of progress prepared the way for another; the germs of all useful inventions being supplied, one by one, in the things of use of various kinds, that uninstructed men invented. It was a long and hard road to attain the goal where man was master of enough art to clothe, feed, and warm himself, comfortably, as man now conceives of comfort. Without the aids of the experiences of past generations, without masters, with only unaided genius, and what suggestions personal experience and contact with Nature supplied, the early

men must grapple with the problems that were continually being forced upon their notice demanding solution. Who could cope with such difficulties? Who, but those that knew no other way, and waited upon Nature like the dependent child, until her promptings supplied the place of teachers, experience, and acquired skill!

But it shall not be said there were no teachers to these early children of the Highest,—no prompters to stimulate the laggard intelligence, to awaken the imagination, and set in action trains of thought that led to discoveries and inventions. "The angel of the Lord" often "met them in the way," and stirred their infantile minds by such impressions as could be made and understood. The old records contained in Genesis illustrate this fact. That is not all fable which relates how the ancient Patriarchs were guided and protected, their interests made a matter of concern to guardian angels, who appeared to them as men, often, as is related; which proves to this age, that psychological power was exerted over susceptible persons, and over many individuals at a time, on some occasions, by superior intelligences, for evidently good purposes. These early people were entitled to the watchcare of heaven, and they had it; as every succeeding age has, and must have.

Thus it was, that in the evolution of language, inspiration was an important force. Association of men developed language; first, that of jesticulation, or pantomime; afterwards, vocal sounds signifying ideas and things; then spoken language. Ideas took form in speech, as men learned to imitate the sounds of Nature in its multitudinous modes of expression, and to copy the intonations of voice of the animal races, and of each other. The intellectual status of a tribe, race, or branch of the human type, determined the character of the language developed by it. This was the law at the first institution of language, as it is at present, in modified form,

as every observer knows. The location, surroundings, racial tendencies, etc., of every separate branch of the human family, at the present day, exercise an influence in establishing their intellectual status, and in determining the character of their idioms. The law that fixes this is that which creates the differences in every kingdom of Nature, dependent on location and conditions. Different continents, countries, and zones, develop the differences of species in the same families and types of the Animal and Vegetable Kingdoms. Acclimation of varieties of these in new and foreign locations involves important changes of character, that exhibit themselves, ultimately, in subsequent generations. It is easy to comprehend how, in the migrations and settlement of various branches of the human race in all zones, on different continents, in remote divisions of the same continent, and in the archipeligoes of the oceans that bounded the ancient parental domains of the race, the diversities of race, and of language, as well, were outwrought. These have been as changeful as the centres of power, which have shifted, like the shifting winds, from one point of the compass to another, from one tribe, nationality, or race, and locality, to another, down through the revolving centuries since man became an aggressive being, to the present; and these changes are impressed upon the peoples of the earth in their racial characteristics and language, in unmistakable characters; which, yet, cannot be plainly deciphered.

The obscurity which envelops the early history of the race, does not conceal the fact, evident from the researches of linguists, that language had developed into a science in prehistoric times. The data in possession of investigators are, as yet, too meagre to admit of the fixing of dates of the origin of any one family of languages, or of the peoples and races who were their founders; but it must be inferred from what is known, that previous to

the dawn of the period of authentic history, there were peoples that had arrived at a stage of civilization corresponding, in many respects, to that of civilized nations of recent times.

The arts of civilized life were practiced among some nations as far back as history can be traced; and it is a question of much import, from whence these ancient peoples derived their knowledge, and how it was that a high order of arts flourished in that early period, on the verge of the fabulous era, when it is supposed by many, that mankind were just emerging from barbarism, their first infantile state, or were just beginning to people the earth after a recent universal deluge; — arts, some of which are lost, and others possessed only by civilized nations that have developed them through superior culture, or derived them so perfected from former ages of enlightenment of the historic period. The chasm that divides the most ancient civilizations from those of the historic period, is dark and wide; spanned in rare instances by memorials left as landmarks of the forgotten age. The fabulous era that preceded and ushered in the historic period, is like a veil that hides from this age the great past, wherein the beginnings of progress in every department of life were made; and wherein the race accomplished an important stage in its career.

Previous to the decline which marked the closing period of the seventh great era, to which reference was made in a former chapter, branches of the white and mixed races had developed a degree of cultivation in the arts and sciences that entitles them to be called the fathers — the originators of these. They scattered the germs of all useful arts and sciences throughout the thickly peopled centres of the then inhabited portions of the globe; and, in some cases, these germinated and bore luxurious fruit, previous to the revolutions that culminated in the downfall of the oldest civilizations and

the establishment of those that culminated in the early dawn of the historic age. Many of the arts practiced by the Phœnicians, Egyptians, Arabians, Assyrians, Babylonians, Persians, etc., in the earliest times of recorded history, were heirlooms, handed down from generations of forefathers in the antediluvian age; who were practising upon, and improving them, when the decline commenced. Then there was a partial suspension of such activities among even the most advanced peoples, while the great mass of mankind sunk into the inactivity of a barbarous, or semi-barbarous state, or into the sloughs of savagism, many tribes and nationalities of whom had before attained to some degree of culture in various directions. Thus the science of language was propagated from the ancient age, and the arts of alphabetical and symbolic writing, with others as important, that are not generally traced to this ancient origin.

The centres where the highest families of language were developed were, at an early date, fixed by the founding of distinct nationalities in widely separated centres, to which centres were subordinated numerous tribes and minor nations, that followed the lead of the parent state, developing on the same plane, as far as qualified so to do by race. The distinctions of race were plainly marked, from the incipient stages of human growth. Evidences of this exist in abundance at the present day; among which, as plainly marked as any, are the languages in use by the various branches of the race. The Aryan tongues originated where the white race held sway,—where it was born; and they have propagated themselves with the pure branches of that dominant race, as the dominant, the superior language of the enlightened world. The Semitic languages have been those of white nationalities developed under different conditions and living in contact with inferior races, or on the borders of the African domain where intermix-

ture of races was a source of corruption to the language of the superior race. The vague relationship that is discovered and hinted at by some linguists, between the higher families of language, is as real as the relationship of peoples that originated from the same parent stock, after the first forms of speech had been instituted; but which separated in the infancy of language, and formed distinct tribes and nations, developing languages from the original root peculiar to their respective places of abode suited to their intelligence, conditions of climate, soil, products, etc., and their position with regard to tribes of inferior races.

The stability that has been, in a degree, characteristic of the higher tongues, as a consequence of the literatures and more stable forms of organization of government, etc., of the peoples using them, has been wanting in those of inferior races. The idioms of all inferior tribes and nations, to-day, bear the impress of changes that have been occurring in every antecedent age, consequent upon the low character of the intelligence of people that had no literature to outlive conquests and subjugations, whereby to preserve forms of speech and treasures of national lore. Therefore it would prove a more difficult task, even, to trace the lineage of any of the numerous tribes of barbarous and savage people of the four quarters of the globe, back to the original centres whence they emanated, than to trace the origin of the Semitic and Aryan races through the labyrinths of change that separate the present age from the remote period of the unity of each or of the two. This would be an impossible task, with the present light possessed on the subject; but it is safe to predict, that investigations continued on the scale already begun among ancient records, will reveal treasures of knowledge of a forgotten past, that will give the key to important facts concerning the early history of the race. It is not the purpose here to attempt a delineation of this

history any further than to show how history, science, and Nature, reveal it, and to trace effects to their causes, in the domain of Ethnology, as has been done in previous chapters in the domain of Geology.

Asia was the cradle of the higher languages, and of civilization itself. Until late in the Antediluvian age, it held pre-eminence in learning and the arts. Northern Africa was preparing to receive the legacy of power from the parent state, while the white populations were centralizing and unfolding the capacities of great nationalities, and deriving from more ancient centres the stimulus to progress.

Egypt is an example of a state that arose in power previous to the great decline, deriving its stimulus to growth from neighboring Asiatic nations, that flourished contemporaneously with its early rise. It was in the morning of its day, the opening period of its energetic life, when the older nations had passed their meridian; and, hence, survived the dark age as an energetic people, ready to redouble its energies and its labors when Nature was prepared to co-operate with it in full accord. The reactions of nations in those days, were what they have been since; effecting the same results, near and remote. Power shifted from centre to centre, from nation to nation, centralizing itself, finally, with the most energetic; and developing strength as a people unfolded their energies. The supremacy was with the strongest physically and intellectually, as at the present time.

That nations have their childhood, manhood, and old age, as marked as these stages in human life, none can doubt, who are acquainted with history. The graves of nations are in the vortex whence are evolved new ones; the old living in the new in derived social forms, and in the blood of the people. Ancient Egyptian art, science, literature, and religion, may be termed the fruits of the ancient age, as modern American civilization is the fruit

of the Anglo Saxon and others, combined; with the difference, that in the former case, an age of barbarism and superstition had supervened between the period of the founding of the Egyptian empire and that of its culmination in the historic age, which had made its impress upon every thing, especially the religion of the people. The same may be said of the nations of South Western Asia, that arose in their ancient grandeur in the early historic period, giving evidence in abundance of a parentage in the past of high order. They did not derive their knowledge of arts and literature, their science and political economy, from nations that had not outgrown the Patriarchal form of government, though that form was in vogue among many peoples of the same age, as it was and has been in every preceding and succeeding age to the present.

Governmental forms may be said to be indicative of the age and progress of communities of nations. The Monarchial form of the ancients was despotism exercised over people that knew no better form; that were the tools of their rulers, to be used for their purposes, whatever they were. The masses of the people were unlearned, and in slavish bondage; while slavery was an institution common to every people. Liberty of action was restricted to the few; and these few were those, who, by superiority of intelligence and attainment, could exercise an influence over kings and courtiers. The priests in the temples, the counsellors of state, the philosophers and sages, monopolized the liberty and the learning, usually; while the masses, and, generally, their rulers, were in ignorance. Thus it was, that learning was rarely diffused; and in prehistoric times, so rarely as to have left few memorials to this age recording its existence. Exceptions to this rule existed in the early historic age, and in the prehistoric; but they were few, and confined to small communities of men, who were the

repositories of the best civilization of an age; the main influence through which it was to be enstamped on succeeding ones. As Ancient Athens impressed its influence on all succeeding ages through its superior culture and form of government, so there were other Athens, other states, that, like the Grecian, and in times remote in the past from the Age of Pericles, cast a light over surrounding darkness, outstripped their neighbors, and transmitted to after ages treasures that enrich more than gold and gems — treasures of stored learning and experience.

The Monarchical form of government succeeded the Patriarchal, after the latter had been developed, first, in its most simple, and then, in its complex form. It was first the family, then the tribal organization, then the community of tribes. The father in the family, the most honored grandsire or aged relative in a related tribe, and the most experienced sage in the community of tribes, that exercised the functions of Patriarch among the early men. The King succeeded the Patriarch when a people had developed numbers, and partially outgrown the idea of servile subserviency to the father, or his representative, the Patriarch. The title of king was conferred on rulers, indiscriminately, after the prerogatives of kingship had been defined. The oldest Patriarchates were not despotisms like the Monarchies that succeeded them.

The ideas of the terms, father, and king, are different; and this difference existed in these distinct forms of government. The prerogative of the father was to rule despotically, but at the same time, with a fatherly interest in his people; his sway being nominal, if he chose to make it so, the people being free to act within the bounds of family or tribal order. The king centralized power as the patriarch did not. Monarchy became a necessity when the people of a community had developed the in-

telligence and strength to become a power by concentrating their energies. Confusion and anarchy were perpetual among communities of tribes that had developed propensities to aggression and acquisition; and it is certain, that this anarchical state is less favorable to progress than despotism, that concentrates power to develop strength and order.

The ages which were requisite for the evolution of all these successive forms of government from the rudiments germinal in the first families of men, were many; as can well be conceived. They are divided into distinctly marked periods, minor eras, and epochs, in correspondence to the subdivisions of Geologic time; the several stages of progress of the race as a whole, being marked periods dating from epochs of revival or stimulation of general progress; these stages being subdivided differently according to the status and character of different races and branches of races. Physical Nature acts and reacts with the race; therefore, in the ages gone and forgotten, like those that can be studied in the light of science and history, to-day, there was a correspondence between physical conditions on the different continents in inhabited localities and the inhabitants.

Continental Asia with its superior surface conditions, and as the cradle of the white race, that reacted upon those conditions to intensify production and progress for long ages, could foster the growth of civilization from the germs that the first families of the superior race developed; while in Continental Africa, progress was hindered by inauspicious conditions of race and country reacting with each other; though important exceptions to this rule there were in some districts of this continent. In Continental Europe, for ages after emigration had entered it and sought out its most favorable sites for settlement, the conditions were such that progress was stayed, and the people deteriorated into savage hordes

that, in some instances, vied with the beasts of prey in ferocity; living on a par with them; leaving as monuments of their existence, relics rude as their age and country, intermingled with those of animals, that tell the story of the age and opportunities of the "Cave Dwellers" of Europe. America, too, tells its tale to the effect, that a race will not perpetuate itself, that does not possess the elements of perpetuity, whatever its country may be; but will achieve a certain stage of advancement, under favorable conditions, after which it must surely decline, unless some stimulus to its blood and activities be given through the intervention of a superior race; it reacting, meantime, unfavorably upon its locality. The exemplification of this principle is exhibited in the remains of ancient races, that are scattered over the American continent, which have left no sign besides, except the native tribes of the present age, whose status bespeaks the fatal decline that commenced at a period too far back to be traced; and many of whose localities are eloquent of the stagnation of the human forces that were designed to help the desert to blossom into fertility.

The Antediluvian ages were those which gave birth to many of the gods and demi-gods of fabulous history. Great heroes and statesmen, whose exploits had been handed down in traditionary lore through the dark ages, became objects of worship to ignorant and superstitious people, many of whom had lost, even the memory of civilization, and consistent forms of religion. The religious sentiment of mankind was awakened early in the life of the race; but it exhibited itself, at first, in such forms as indicated the low grade of spirituality and mentality of the people. It is difficult for those living in the light of the present civilization, having teachers in every department of knowledge, imbibing mental and spiritual nutriment with every breath, drinking it in with the mother's milk, at her knee acquiring an insight into

spiritual things, that is strengthened at every turn in association with mankind,—it is difficult under these circumstances, for people of this age to conceive the disadvantages under which the first people labored in acquiring knowledge of any character,—religious as well as any other. Great ideas are of slow growth; truth taking root in the soil of the human mind tardily, in consequence of the imperfection of the faculties while man is in the material state. Teachers are a great advantage, since they implant the germs of ideas, that take speedy root in minds otherwise well furnished; that is, with a store of acquired knowledge that acts as a fertilizing element to new thoughts and ideas, insuring some sort of a harvest from every newly implanted germ.

The mind that is devoid of any knowledge, only such as is acquired by daily experience and association with those as ignorant as itself, may be compared to the garden that must await the tardy action of Nature to supply it with the seeds to produce a harvest of good fruits, and withal, to prepare its soil for the reception of the seed. The floods, the winds, the birds of the air, and other agencies, will, in course of time, prepare the ground and plant the seed; and then the harvest from such a sowing is poor. The husbandman will not waste his time to gather it; but it returns to the soil as a fertilizing element; and, in time, he avails himself of this elementary preparation, and improves upon it by his intelligent methods. The conceptions of the earlier generations of mankind were gathered, as though from the birds of the air and the winds of heaven, and deposited in a mental soil as sterile as a Sahara. The teachers were long in coming, whose instructions were solid nutriment to the mind; as the pupils were long in preparation for receiving such teachings.

Nature supplied teachers of various kinds that in-

stilled first principles into growing mentality. The sentiment of veneration was awakened by demonstrations of power. The winds whispered mysterious sounds; and when the fierce blast, accompanied by thunder, lightning, and flood, swept over the earth, demolishing as it went, fear deepened into awe; and a conception of power beyond what man possessed, was aroused. The sun in its inapproachable grandeur and beneficence, the starry heavens, the moon, the waters, that, swayed by tempests, exhibited such fearful phenomena, and whose depths were as mysterious as the skies, and more dreadful, all these reacted with effect upon the people; and they learned of God from them, at length, assisted by such inspirations as they were susceptible of receiving. Seers and Prophets were developed among them, and assisted the masses in unfolding their spiritual capacities; as there were always those among the people then, as now, who were superiorly sensitive to spiritual impressions, and who were impelled to make it their vocation to instruct the people in spiritual things. In the early days, such were rulers, and guides to the people in all things. They assumed authority as conferred by heaven. This is instanced in the history of the Patriarchs recorded in the Hebrew Scriptures. The fathers of families and tribes; as, Abraham and his son Isaac, and his grandson Jacob, who were sufficiently susceptible to spiritual influences, and, at the same time, of such mental capacity as to make them safe guides to their families and descendants, and of whole tribes, were impelled by their impressions to assume authority, and act as judges and governors, as well as religious teachers. It was the best that could be done in times when the masses leaned on authority, and when poor guidance was better than none. Prophet and people were, as a matter of course, nearly alike; the one only a little elevated above the plane of the other; but that little ad-

vance was the foothold from whence the lower could be assisted to rise.

The religious ideas developed by the fathers, which may be denominated the first — the first which assumed any definite form, outworking in modes of worship, etc.— though crude, were not the base superstitions of Savagery, which, in this day, appall the higher instincts of civilized man, and belie the idea of intelligence, of humanity, which attaches to mankind of every race and grade. Humanity in the rising scale of progress from the first infantile state, like the tree of animal life, sent out its branches upward, outward and downward; as has been already intimated. The upward shooting branches were those that exhibited the innate tendencies of human nature in the clearest light, from the first; they were those that, by virtue of the inherent manhood within them, pursued a more direct pathway to the unfoldment of the higher human faculties than any of the others; serving as the *nuclei* from whence emanated developing forces that would react upon all lower grades. The religious faculties being as natural as any other to the human being, they unfolded with the others, and by the same natural modes. The objects, the phenomena, that elicited awe and veneration were, naturally, those that were first deified. The sentiments of fear and love were exercised towards objects with which the people were so intimately associated that they understood them, and hence, they failed to awaken religious sentiments; which, to be such in reality, must be exerted towards a superior principle or intelligence; one that is out of the reach of the common human faculties or powers. Fear deepened into awe becomes a religious sentiment; and so with love developed into reverence. The wild beast that devours, can be slain, or subdued to the will of man; and the sentiment it awakens is hardly allied to that aroused by the elements, the sun, and the starry

heavens, in the imaginations of untutored men, whose instincts have not become depraved by savagism.

The temples where the Most High was first worshipped by the children of men, were the groves, the fields, where were revealed to their susceptible minds wierd, grand, and appalling phenomena; and the first objects of worship were the elements, the sun, moon, and the starry heavens. Systems of religion arose which were as diverse as the mental status of the different branches of the race; and were propagated with these over the earth; changing their form as peoples progressed or deteriorated. The race foremost in intellectuality from the start, the one in which the higher instincts of humanity revealed themselves in clearest light, was that with which originated the highest form of religion; and which unfolded this into various forms adapted to different branches of the race; each of which possessed elements of consistency and truth, and in proportion to the powers of clear insight of the teachers and prophets those branches produced. A form of Monotheism was outwrought in the ancient age, which is exemplified, in some degree, in the first chapter of Genesis, and in the book of Job. The early Hebrews derived their system from this, through their great Patriarch, Abraham. Of the character of this system, something can be gathered from these ancient records. It was a philosophical system, superior to any that has succeeded it, in important respects; the fragments in existence, being an index to its character, and that of its founders; and the prophets and seers developed as teachers of it. Could it be supposed that the race was in its infancy when Job of "the land of Uz," and Abraham of "Ur of the Chaldees," lived and taught, then it must be believed that it was developed as a supernatural growth; as maintained by theologians of the most orthodox school; instead of appearing in the order of Nature and unfolding after its

plan. Theology, to-day, can hardly come up to the standard of Job and his friends in their conceptions of the attributes of Deity, and the principles that underlie moral responsibility.

There is an amazing flood of light cast upon the questions of the antiquity of man, and the stage to which the higher branches of the race had progressed at the opening period of the historic age, by the book of Job, and some parts of Genesis; light that cannot be ignored in solving these questions correctly. Germs of truth in philosophy, science, and religion, survived the great decline, to serve as the seeds of a new growth, which should be devoid of many of the imperfections that were inherent in the old systems; which latter, must needs be replaced by a method of radical change, that would thoroughly reconstruct the elements composing them. Nature is thorough in its work, sparing nothing that is in the way of progress by the established order. The old systems were gradually falling to pieces in consequence of inherent defects, as the people were on the inclined plane towards the dismemberment of empires, and of society itself, for a long period previous to this consummation in a dark age; and it was Nature's opportunity to uproot the old, and implant the new, in soil already prepared, and enriched with living germs.

In the new start the world took after the fabulous age, there was much confusion of systems, and misappropriation of principles in the reconstruction of forms of religion, philosophy, etc. Illustration of this is to be found in the great systems of the East, and in the Hebrew scriptures. These latter were compiled from fragmentary records, some of which, as appears from their character, had their origin with people who had lost the true idea of Monotheism, and with it, a clear comprehension of religious and philosophic truth; but who had incorporated into their system fragments of one that was as

high above their conceptions as the heavens above the earth; as witness the first chapter of Genesis, as compared with the second, and other portions of the book. Here the revelations of an ancient seer of a far remote period, of a high order, are side by side with myths; the former standing out clear and distinct from their surroundings, like diamonds set in earth and mortar. Thus was appropriated in the new order, relics of the old; seers and sages whose memory had passed from the earth, contributing to the revival of literature and learning. Skilled architects, and artisans of various kinds who lived only in the works of their hands, in the same manner gave the clue to arts which culminated in Egyptian architecture in the early historic age; and, later, in the Grecian, and other forms, and in the cunning workmanship of artificers of all the ancient advanced nations. Superior art was born of intelligence, that was the outgrowth of experience and learning,— of a knowledge of principles, that is only acquired by ages of investigation and practice with Nature by correct methods. Novices did not plan the architecture of Memphis, or originate the ancient Tyrian fine arts and manufactures.

Leaving the consideration of the evidences of the age of the race and its status previous to the fabulous age, which antedated and ushered in the historic period, it is proper here to introduce the discussion of the causes which led to the great decline, and consider the vital phenomena attendant upon this consummation; and point out, from this glaring example, the influence of man upon a planet.

The one established natural mode of action is illustrated in the life of individual man, of nations, and of the race at large. Life and death, labor and rest, action and reaction,—positive and negative; infancy, youth, maturity, age, and decline; and change, that ushers into

a higher life, a more advanced state of action or being,—this is Nature's mode. Progress is by stages; which latter severally represent so much accomplished in the general work of advancement, each preceding complete stage being initiatory to a higher. Such is the order in the physical universe; as has been fully illustrated in former chapters; and such is the spiritual, the intellectual and moral order, of which the race of man is the representative on a planet. Every distinct stage is typical of every other, in the moral, as in the material world; and all are interdependent; there being no possibility of dispensing with any one, or any number of these stages, and the work of progress go on to full and complete consummation. Youth follows infancy; the more mature period of young manhood, youth; full maturity, this; age and decline closing up the career of the physical man, who lives out his natural term of life in a fixed order, from which there can be no variation, in the nature of things. Thus, in every realm of being and force; the interrelation of forces of all grades and characters, fixing the law. The intellectual plane exhibits the higher action of this law, but does not change it; the variations from what is observed in the physical order in the outworking of planetary life, etc., etc., being this higher action.

The human race accomplished a great stage previous to the historic period. This stage was subdivided into minor ones, each a marked one, with reference to some department of intellectual growth, which was exhibited in some branches of the great family, and not in others, according to circumstances. The culmination of progress in the evolution of language, arts, literature, and religion, as these existed in the period immediately preceding the age of decline, marked the extreme of development to which the race could attain in the then existing condition of things. It marked the evolution of the

higher type of forces; which, as the reader will remember, always has birth just previous to the age f decline which closes up all eras, being adapted to the higher conditions of the succeding era, as a spiritual birth—"a voice crying in the wilderness, prepare ye the way" of progress. A spiritual birth, these superior forces were, most assuredly. The advanced step was taken which overleaped the chasm of the great dark age, when the advanced nations had developed the forms of language, literature, arts, and religion, that outlived this, and formed the bases of structures the new age was to uprear on the ruins of all that was destructible in the old. There needed a remodeling of society after a higher plan; a working over of the material, and a selection of the better part, wherewith to start anew the progressive journey towards a more complete unfoldment of the powers and possibilities of human nature in the aggregate. This could only be done by extraordinary means —such means as the exigencies of the situation developed, according to the plan exhibited in the order of things, from first to last. Extraordinary emergencies are sure to develop extraordinary means of relief from them; as witness the crises in eras of physical development, of national and individual life. The very difficulty begets the means of deliverance from it, by developing the resources, the energies, physical or mental, or both, that will outwork the problem of progress by overstepping the crisis. In this case, the means was nothing less than the disintegration of society,—of nations and communities, the destruction of old forms and institutions, and the partial depopulation of the earth; and the remodeling of all these from the selected material, on the higher plan which a new age, with renovated conditions, should develop.

The reconstruction of society by means so extraordinary, has its parallel on a smaller scale in every epoch

of revolution among tribes and nations, in every age. Old models are copied as far as they serve the purposes of reconstruction on a new plan; elements indestructible in their nature impressing themselves upon institutions of every age, as immortal germs that are destined to outwork an individuality by interacting with others in the social system. Ancient models needed to be forgotten, in part, by people on the intellectual plane of the fathers of the new age, lest they be copied too true to life; and to do this was not for the advantage of their successors.

The history of events that led to the catastrophe of the complete subversion of the ancient order, and the substitution of that which introduced the historic age, does not belong to the subject proper, of this chapter, only so much of it as is intimately associated with the principles it is intended to set forth and exemplify. To state the fact, that prior to the great Noachian deluge, there was a state of society in the earth that evoked the maledictions of heaven, is only repeating what the Christian world has always believed; but what the reason of a materialistic age doubts, or disbelives altogether. And further: To state that prior to the age of Noah, there had been a better state of society morally, and spiritually, one that had given birth to the ideas, the religion, of this old Monotheist and preacher of righteousness,—the philosopher, who could declaim against the corruptions of a people whose very presence in the earth was a corrupting influence to it, the prophet, whose spirituality enabled him to foretell the event that should consummate the ruin of the transgressors—is to state what can readily be inferred from the Scriptural account of these events, and from all ancient history that reaches back to the first limits of the age of fable. That there had been a golden age in the far, forgotten past, is attested by all the evidence that can be brought to bear upon the question. This age was the theme of song in the Homeric, and the Vedic

ages; gods and goddesses, marvels of virtue, power, and prowess, figuring as the heroes and heroines of tales so old that their true significance had been lost in fable. The idea of it, so prominently set forth in ancient writings, has inspired sectarists with the belief in the actual fall of man from a paradisical state in which he is supposed to have been created, to that in which he is believed to have been at the commencement of the historic era. The following truth has seldom been conceived by ancient or modern theorizers on the subject; viz., that the race, subject to the same law of progress as lower Nature, attained to a certain stage of advancement in the prehistoric age, where it rested and recruited its energies, preparatory to taking a new start in a new and more advanced stage of its career; that this rest was like that of the forces of Nature in the early eras more than any subsequent one could ever be; that it was such disintegration of social forms as may be likened to the disorganization of suns in a universe; or of forms of matter on a planetary surface in an early era, in the inactive intervals that precede active periods.

The idea must, at once, suggest itself to the careful thinker, that the loss of attainments in civilization, in anything that bespeaks the intelligence of a people, indicates superficiality, and radical defects in intelligence and acquired knowledge. This is a principle that must be carefully borne in mind, for it has a direct bearing upon the subject. That is necessarily deficient in organic force, which can fall to pieces when brought to the test of measuring strength with disturbing agencies. That civilization is hardly worthy the name, that cannot survive the onslaughts of barbaric force, unless it be confined to a people too weak in numbers to be pitted against hordes. It is the peculiar prerogative of knowledge to overcome ignorance, and propagate itself at the expense of crudeness and barbaric customs. But, to be a power

in a world where ignorance and barbarism are prevalent, true civilization must have the balance of power on its side; it must be sufficiently diffused among the masses, or some races, to have attained a foothold that cannot be disturbed and lost when revolutions overthrow governments and create confusion in the social body. Antediluvian civilization was not of this kind — could not have been, in the nature of things. Knowledge was not widespread; true enlightenment had not enstamped itself on the institutions of any people with sufficient clearness and power to fix their stability through an era of revolutions. The progress that had been made, however, was real; having engraved itself in durable landmarks on certain forms and institutions, which transmitted their excellencies as a legacy to all future ages. As an example; the Monotheistic idea, handed down to the present age through the agency of the early Hebrews, has proved its immortality; its priceless worth as a civilizing agent. The light that shone from the past upon the present era was in few and scattered scintillations; but it was sufficient in volume to illumine, though dimly, the pathway that led the fathers of this age to a higher plane of progress than the older fathers occupied.

In infancy and youth, all acquired knowledge is superficial. Experimental knowledge, alone, is deeply rooted in the individual mind; such as youth cannot possess for lack of years. In the late antediluvian age, the foremost races were young in all that pertained to true civilization. They were experimenting with ideas and discoveries but lately born; and their mistakes and failures were as natural as the real progress they made. The pause in the progressive career of the race was universal, because of the status of all branches — high as well as low. Youth had not the strength of mentality to resist the depressing influences that threatened it; it lacked the experience, the strength of character, which maturity

supplies as a safeguard against threatened evils. Consequently it succumbed,—the highest branches of the race suffered with the lower, being engulfed in the same maelstrom; which was an abyss of depravity to most peoples, and a low level to all. Physical forces, in their decline, pulled down people who had not the intellect and force of character to devise and put in operation means to arrest the spread of demoralizing influences in society; which influences react upon physical Nature, hastening decline. Barbarism begets wildness in Nature, as intelligence, civilized methods kept in operation by an energetic people, beget energy and fertility in the soil. In an age when the industries lag for want of knowledge and stimulus of the right character to keep them in operation, while at the same time the universal tendency throughout the material world is to depression, decay, there is no power to arrest decline of both the mental and physical forces; both, so inextricably entwined, retrograde together to the plane where they must pause, and gather themselves up for a renewal of the battle of progress. They can fall no farther backward than to the firm ground, the secure stepping-stone, already reached, from whence they have essayed to climb to heights beyond their reach before their strength shall have been renewed, their energies stimulated to a pitch beyond what they have been heretofore capable.

In the present industrial age, when the numerous industries of enlightened nations react with each other, and from nation to nation, over the civilized world, and trade is stimulated by healthy emulation, while new discoveries in the domain of science and art, and newly discovered wants, are perpetually stimulating to greater exertion, and in all possible directions; and commerce is ploughing all seas, carrying the seeds of enterprise to the doors of the most debased tribes,—in such an age, Intelligence is the power that supplies a stimulus to

forces that would otherwise lag. Intelligence, the latest born and superior force, has asserted its sway, demonstrated the influence of intelligent man upon a planet, teaching, by analogy, the converse — the influence of non-intelligent and depraved man on the localities he inhabits. The latter becomes, first, the leech that drinks from the sources of life without returning nutriment; then the ghoul, that devours the living and feasts upon the dead; until Nature becomes a waste, where not even the destroyers can find adequate subsistence.

The degenerate people of the old world polluted the springs of life upon the planet, by their habits. The anathama pronounced by Noah bespeaks the conditions, —"The earth also was corrupt before God." The floods of sensuality and barbarism that overswept the earth, at this period, were unprecedented in the history of mankind. The floodgates of ignorance and moral degradation were flung wide open, when the restraints of government and moral rule were removed by the overthrow of governments and religious systems, and of the other various restraining influences; all of which are the result of civilization, and its safeguard, while populations are slowly improving in every thing that makes men the instigators of safe social forms. The vanguard of civilization is the host of moral reformers, statesmen, priests, and prophets, who are in advance of the masses, and devise forms of society, as governments, religions, forms of marriage, etc., and who lead in fixing the moral sentiment of the social body. In the early days, the people were more dependent on leaders than at present, where the highest social forms prevailed; and revolutions were more dangerous; since so few possessed the requisite qualities of reconstructors of stable social fabrics. Revolution meant retrogression and destruction of the safeguards of society, when the social body lacked the stamina, the enterprise, to devise new forms.

The exigencies of revolutionary times are sure to bring out the intellectual resources of an energetic people; which, together with patriotism and kindred virtues, are sufficient to evoke some sort of order out of confusion, and set a people again on the road of improvement. Intelligence is developed by the very emergencies that try men's souls in their most tender sensibilities; love of home and family, of kin and country, being the spurs to awaken all there is in a people, in struggles that threaten danger to cherished institutions. But where energy is lacking, there is no savior for a people from the consequences of this want. They are on the plane where stimulation of their vital forces has become a vital necessity to their very existence. They will decline until a new start is given by some foreign influence, or they will die out — be utterly lost from the earth as a distinct people; the last remnants of the race dying from very stagnation of the life forces. The energies of the ancient people had waned; and hence, with all conditions as they were, they must decline until the stimulus was supplied to set in action their dormant forces. They had not, to any large extent, developed to the plane where their industries supplied the force to counteract the waning tendency of the physical forces. There were but few people who were qualified to raise up barriers against the onslaughts of disintegrating forces, that were surely marching on to overcome where they might. But these few proved a host; for although they could not stem the overwhelming tide, they were a power to force reaction sooner than it could have come had all peoples been on the low level of the most degenerate races.

Degeneracy in those days meant what Noah and other early prophets characterized it,— what it means in every age when savagery has degenerated into the lowest sloughs of sensuality, when once civilized people have perverted the uses of civilization to serve the basest pas-

sions of degenerate man. On the upward grade, when races are emerging into the light from the primeval darkness in which they were born, they exhibit tendencies of character kindred to sensuality, but not that base sensualism that is the result of pampered passions,—educated bestiality,—if the term may be allowed, which is the perversion of natural appetites into the grossest lusts. History and revelation depict the vices that societies develop when fallen from an estate where they have learned the virtues, unfolded the natural attributes of human character, and practised the arts, all of which they have perverted to the uses of a barbarism more barbaric than the name ordinarily implies. Association of people on the downward grade develops the loathsome vices that poison the fountains of life at their source, by corrupting the reproductive forces. The seeds of decay and death are thrown broadcast into the atmosphere, taking root in the soil, and in every thing that has life, from the "lazar-houses," or infected districts, where men and women live in debauchery, practising incest, and other crimes against themselves and each other, and against all the universe outside, as well; since all Nature is a unity, in the sense that forces act recipocally, propagating each other from center to circumference of the domain of life and force. Man or communities of men are so much to Nature, in the matter of instigating life and force, that when they suffer, all Nature in their domain suffers with them. They carry devastation in their train, like the terrible Zenghis, when they disregard the laws of their being, sinning against themselves. The race, or nation that fosters the vices referred to, is, above all others, corrupt; and finds no room for repentance, after a certain stage is past; but must meet the destruction it has bred. The scourge it has invited will as surely descend upon it, as that laws defied are their own avengers; and with a severity proportioned to the offense.

Noah inveighed against all people; the whole earth was under the curse uttered by the prophet. This is significant of the truth, that degeneracy was universal; decline was sapping the fountains of life of not only the race of man, but of all the world under his sway. Nation reacted with nation, tribe with tribe, with but few exceptions, and all with the material world, to intensify depressed conditions. It was as though chaos had come again; and but for the remnants that proved the saving element, and "found favor," like "righteous Noah," the earth would have become depopulated, so sunken had the majority of mankind become in that pit from which there was no extrication, but through means of the favored few, who served as the nuclei around which to start the reorganization of society.

Who shall depict that social state of which there remains no records but such as are contained in extravagant fable and in the brief history of Noah's time found in the bible? It needs not the pen of the historian to tell in detail, the story of times so degenerate that what remains of their memory appalls by its hideousness, and excites gloom and foreboding by its contemplation. The denunciations of the prophet were to a world lost — gone beyond the hope of salvation. "I will destroy men from the face of the earth; they are too corrupt to live, and are a corrupting element to the earth." This was the burden of the recorded curse. It is, indeed, a pathetic denunciation; implying more of human misery than can be readily conceived; and more of warning to all future generations of men. History is said to repeat itself; and this history has repeated itself on a smaller scale in many cases of nations, tribes, and families, of the human race, since that period; and must continue to do so, when the same conditions are repeated. There is a philosophy in the rise and fall of states and nations, their progress and decline, that all in this age would do

well to study; since there is such a crying want of a true understanding of the science of life and of social progress. The lessons of history are for the present and future; and for the people to neglect them, and disregard their import, is injustice bordering on criminality.

The mythical character of the history of Noah and the deluge contained in Genesis, and of all other histories of the same event, which are more mythical still than that, causes them to be disbelieved by most of those who do not take the scriptures and old legends as their literal standard of belief. However, it cannot be doubted, in the light of ancient records, that Noah lived, and that a deluge occurred, whereby destruction of life, and devastation of an extensive district, were caused — how extensive, can be inferred only in part. It will not appear mythical — that portion of the scripture record that narrates the causes of the destruction that overtook men, to those who comprehend what the situation must have been. The myth is the exaggeration of the extent of the flood, and the supernatural character attributed to natural causes and effects; besides, the preceding and succeeding portions of the narrative are vague, and in the main, unreliable. Legitimate causes produced legitimate results; and the overflows that closed up the Seventh Great Era of earth's history, were the means of purifying it of the uncleanness entailed upon it by generations of degenerate people.

The law has been detailed in a former chapter, which decides, that worn out, corrupted conditions of planetary surface, shall not be propagated from age to age across the natural gulf that divides stages, or eras of progress. In the case in hand, this law is illustrated and fully vindicated. "A remnant shall be saved," was the fiat of the Supreme; and the desolation which waited on events to bring it to its consummation, was hastened by the rapid decline of the race, after it had passed the

turning point, and entered fully on the downward grade. Man became the vampire that sapped the life-forces in the localities where he fell the lowest. He consumed more vitality than he returned, after he lost his native force by indulgence in debasing habits. The gardens that his industry had made to bloom and bring forth in abundance energizing elements for his own use and that of his surroundings, became devoid of life-giving magnetic force; — "desert places," is a fit name for them. Force there stagnated, — declined rapidly, under the depressing influences; and decline was propagated from these human centres, and the climax hastened. As it was Man's prerogative to hasten on progressive conditions, in this case, he undoubtedly accomplished this end by the inversion of the true law of progress. "The wrath of man shall praise him, and the remainder of wrath shall he restrain," said an old prophet. Here the meaning of this saying was literally exemplified. The designs of Infinite Wisdom were not foiled by the transgressors; but good was wrested from the unavoidable catastrophe. The defiled met the destruction they courted, but Nature, Divine Justice, Mercy, was vindicated by the ultimate result. It appears from this history how sure are Nature's compensations, and how they are sufficient to satisfy the, so called, "judgments of God" on transgressors of natural laws.

The floods devastated where subsidences occurred. "The fountains of the great deep" of the oceans and seas were loosed, for a season, and overflows were the order; while storms prevailed, adding terrors upon terrors, to the wild warfare of the elements. The floods were of short duration in localities where the crust had attained thickness and strength to resist the influence of subsiding areas, as sea basins and natural depressions where no such barriers to subsidence existed as mountain ranges or rocky ridges. Stable lands were, in numerous

instances, disturbed and partially drawn down with the sinking sections; but they rarely remained long depressed, since they reacted upon adjoining strata, and either severed the connection with them, or forced them to higher levels by the solidity and strength of their structure. Thus, Noah's flood was of short duration, it being a consequence of such a depression; reaction in a short period restoring the old level, or, at least, causing a subsiding of the waters to such an extent as to leave dry surface where the few survivors of the region could commence life anew. The record does not state, what is the fact, that the waters subsided so gradually in that section that years elapsed before the present level was attained, or before any considerable portion of the desolated area was drained so as to be habitable. Around the Mediterranean, on its eastern and southern borders, was an area that subsided, partially, with that great sea-bed, and soon regained its level above the bed of that basin, by reacting upon it with such strength as to sever its connection with it where the strata would permit; and, where dislocation was impossible with the force exerted, by forcing the latter to a higher level; coast lands, in such localities, remaining at a lower level than in the others, and, in some instances, submerged, until reaction had raised the entire depressed area to the original level, or that which it would retain for the ensuing era. This is one instance out of many, where a dense population suffered from inflows and overflows; Noah's being the typical family or remnant saved from destruction by arks of safety, or flight to high lands bordering the inundated districts, of the many scattered over the continents.

The earth's surface was remodeled to but a slight extent, comparatively, as the reader already knows from statements in a former chapter, by the movements that closed up the Seventh Era and opened the Eighth. The human race had impressed the story of its decline and

degradation upon the earth in characters that should tell to remote future generations the consequences of perversion of natural laws. The law of transfer of force from one section to another of the surface, from continent to continent, or hemisphere to hemisphere, at the epochs of change between active eras, has been fully explained and illustrated in the proper place; but in this connection comes a complete exemplification of the law, which the reader should fully comprehend.

The exhaustion of force by the degeneracy of men, or from any other cause, or all causes combined, in any section, large or small, was followed by the legitimate consequence; the same that had resulted from the same causes through all the past. Action, in the new era, was transferred to new localities from where the waste had been so great; and so the old gardens where the people had flourished most, and sinned most, that had been depopulated, remained waste places after the revival of force. Deserts had usurped the places of cultivated areas, in some instances, and in others, seas covered the sites of cities and densely populated sections. Sodom and Gomorrah had their parallel in more than one instance in an epoch of change that was intensified in localities by such causes as have been described. The "fabled Atlantis" was no fable; but a reality set in myth; and is typical of many islands of seas and oceans, that were submerged by the sinking of sea beds to greater depths. At this epoch, numerous branches of the race that had scattered themselves over the continents and islands of the vast Archipelagoes of the oceans, became isolated from the rest of mankind by the deepening and widening of the main ocean channels that separated them from each other and from the continents; and some were obliterated from the earth, as above intimated.

The highways once destroyed, that had preserved, in a degree, the unity of some races, by affording easy

means of communication between the remotest lands, racial characteristics became fixed as decidedly distinct, where formerly they were less so. America, in the ancient age, was accessible from the Eastern Continent in northern latitudes, through series of islands that thickly studded the Pacific; and until the present, it has continued easy of access in its northern division; but the degenerate races of the Arctic Zone of the two continents have lost the art and the memory of intercommunication.

The races that peopled America were not of the type to survive great disasters like the one under consideration, with a new lease of life and progress that should never expire while the planet afforded conditions for existence, like the white varieties of the Eastern Continent. They survived with a degree of native energy that outwrought different stages of semi-civilization in different branches; but decline overtook them while striving for that stability they could never secure for their nationalities or their posterity. Being of inferior types, they were doomed by virtue of their isolation from the developing agencies afforded by intercommunication with superior races. The story of their existence, their struggles, their triumphs, and their decline, and the utter extinction of the once advanced races of the continent, is inscribed on monumental records scattered over its length and breadth, and on the surviving tribes, whose status speaks volumes of the philosophy of national life, prosperity, and perpetuity. The soil and other conditions in some of their once most populous centres, tell of exhaustion, and the neglect which fails to use the means at the disposal of man, to improve his condition, and create that high order which is success to nations and individuals, and a powerful means of securing a stable footing in the earth.

Asia had been the great centre of progress for the ad-

vanced portions of the race, since its existence; and, of necessity, its vital forces had been drawn upon to so vast an extent as to preclude the possibility of its continuing, through another great era, to be the nucleus of the highest forces. A transfer was inevitable, from its most crowded centres to new lands and continents, unshorn of their vitality, and ready to the hand of the adventurous explorer and emigrant. So with Africa. Its races, natural born and foreign, had vitiated themselves upon its soil; and, together, race and country suffered in the great decline, and its ultimate consequences. There were, however, portions of these two grand divisions, that were of more recent occupation than others; and, consequently, possessed of more vitality and strength to resist the great decline; and to recover from its consequences. Europe, too, was a vast field for the enterprise of the arousing nations; its storehouse of vital elements was full to the overflowing. It was, as it were, a reserve force, to be drawn upon by contiguous localities in the Southern and Eastern Continents, while these were nursing the human elements that were to possess themselves of this land of promise, ultimately; and make it a centre of progress from whence would emanate streams of force, to react with saving effect upon all the earth. From Asia and Africa to Europe, thence back again, to and fro, and to America, the new "Eden" of the white race, has been the direction of the current of vital force the superior race has created, which has been gathering strength and vitality with the lapse of the ages, and the unfoldment of the resources of human nature, until it is on the eve of overspreading the whole earth; not excepting the remote islands of the sea, and the recesses of that continent which has, hitherto, seemed forbidden ground to all but its native races. From conquest to conquest, has been its march, from the period when the race awoke from its dream of ages, to

contemplate its habitation desolate, its inheritance laid waste, in some of its most favored portions; with occasional lapses of nations and states in different countries, consequent upon the same general and local causes that precipitated the great decline, and intensified it.

In pursuance of the history of the race to the opening of the historic age, but little remains to be said; and that with reference to its status immediately subsequent to the disturbances that closed up the old and opened the new order of things. The era of disturbance was short, comparatively, over the whole earth; as conditions sympathized with each other over its length and breadth. The climax passed with the "Deluge," — or deluges, and reaction was speedy and effective. The repose of the race, which had assumed the character of a death-like stupor towards the dawn of the new era, so profound had it become, was disturbed when it had effected its purpose. Like the deep sleep just before the break of day, which is so invigorating, this rest had effected a new birth for the race, or such portions of it as had not passed the limit beyond which there was no salvation. There were signs of vigor in the reawakening that were rich in promise for the future. It is not to be supposed that the influences of the decline were not propagated into the new era otherwise than has been already indicated. They lived in the survivors of the great catastrophes, and were impressed upon the institutions these originated; surviving generations of men that were gradually coming into the light. They were propagated as hindrances to progress, until the generations were born that could rise superior to, and supplant, them. It is recorded how Noah and a son of his sinned; and this is typical of the status of many of the surviving tribes and nations of the earth at the period; some of which did not long survive the revival; others outliving their degradation and establishing their posterity upon the earth. The cities of

Sodom and Gomorrah are cited in scripture as examples of communities that invited the vengeance of heaven by their departures from the path of virtue and rectitude, until they were completely immersed, as an entire people, in the slough of sensuality — such unrighteousness as the persistent Abraham deplored when the angel returned, as is recorded, after repeated visitations, and found not even "ten righteous" in all Sodom. This account is stated after the manner of the times in which it was recorded, and is expressive of two great truths, that stand out clear and distinct amid all the rubbish with which superstition has invested the facts; viz., first, angelic interference in the affairs of mankind, nations, and individuals; second, the potency of wide-spread debasement of moral character, such as existed in the doomed Sodom according to the account, as a corrupter of all conditions, and a means of breeding destruction to all life in the localities in which it prevails. The exhaustion of force by poisoning the springs of life in the abuse of the sexual functions, is clearly indicated in the case of the "cities of the plain," which were destroyed by a convulsion of Nature that left the locality a sunken area covered with salt waters. Heaven itself — the angelic hosts, who do the behests of Divine Wisdom, were not disinterested or careless spectators of sins like these; since, in their ultimate result, by the eternal law, they must work such ruin to man and his works; and it was the business of these ministers of the Most High, to warn and entreat through prophets, and finally, to denounce, and help to precipitate the catastrophe that was inevitable. Such, it is recorded, was their mission, and it was according to law and practice in all the ages.

The Canaanites, as recorded, did not forget the sins of their fathers, but inherited the curse, which the Hebrews were instrumental in bringing upon them. The latter tribes inherited their domain until they, too, for-

feited it, by transgressing evident laws; when they were scattered to the four winds and lost, save a few tribes, whose remarkable vitality and unconquerable zeal for national institutions no reverses could extinguish; but which have preserved them a separate people, up to the present.

The Hebrews were a remarkable people from the first; remarkable in the one characteristic of superior spirituality — susceptibility to spiritual impressions. In other respects, they were not superior to other nations and tribes, as is shown by their history. Their progenitor, Abraham, was a prophet; and his son and grandson after him; and prophets and seers were multiplied among the people with their numbers. This peculiar gift served them in a remarkable manner, as their records show, and as is the truth, though their national pride and vanity has magnified facts in numerous instances. Their deliverance from Egyptian bondage through a series of remarkable prophetic interferences, is unequaled in national history; being a profitable lesson for all generations to study. The exaggeration of the incidents of this history has given it a mythical character; yet, shorn of this, enough remains to show the facts in the light above stated. Abraham transmitted to his posterity the idea of Monotheism, as has been stated; he having been, according to the statement of Melchisedec, the priest, "Abram of the most high God, possessor of heaven and earth." This idea was corrupted in his descendents, who made of their Jehovah, a man after their own hearts; clothed with supernatural powers. Yet, it retained sufficient vitality and purity to work out a higher system through a new order, the Christian, which is directly traceable to it, through its originator, and claiming the relationship, by adopting the Hebrew Scriptures as part of the sacred canon. This transcendent Idea was the "Ark of the Covenant," which was committed

to this spiritual people, as its safest guardians, to be transported by their sacred high priests of prophesy and seership, to the distant era when truth could be comprehended more clearly by the masses; when it should be enshrined as the "Holy of Holies" in the temple of a far-reaching civilization, where it should be safe from sacrilegious touch. Its journeyings were through the deserts of barbarism, through tribes and nations, who scorned it with its keepers, but who could not lay impious hands upon it for its destruction, since it possessed within itself the elements of perpetuity. It was, and ever is, the "God with us," that lives by virtue of its supremacy over every other idea the human mind has conceived of Divinity.

Other tribes contemporaneous with the early Hebrews, in their vicinity, corrupted this religious idea, and multiplied their deities and debased their worship. The age of fable, of gods and demi-gods innumerable, projected itself into the historic age, and decided the character of the religions of the people, for ages. Nations East, West, North, and South, adopted Polytheism; so corrupting what of the true idea they had ever possessed as to almost obliterate it from their religious systems. Much of good survived in these latter, as they were amended in the new age by priests and prophets, who, like Abraham, were the vehicles of transmission of ideas to future ages. Ideas were re-born in the revival of thought, so modified in their enunciation as to appear new, which in old dispensations had worn a guise that disfigured or obscured them. As is the case in every advanced step the race has taken, some rubbish was discarded with the first remolding of thought; while there was much in the old that was worth preserving unmodified, at least by the light the new age afforded.

The thoughtful mind that contemplates the early historic age in the light of history, as it has come down to

the present age, sees reflected in it the old and the new; the latter usurping the place of the former so gradually as to be scarcely perceivable; the former maintaining its position with a pertinacity the outgrowth of custom continued for ages, and only yielding to the mandate of progress. Every successive age repeats the picture of truth contending for the mastery; and it is only by comparing widely separated ages or centuries with each other, or with the present, that it can be clearly discerned what progress it has made in any one age or era. The earliest records of the nations whose history is best known, open in a mist of fable, that is eloquent of the state of literature and all knowledge at the time. Continuing down towards later ages, the light grows more distinct, until, at length, it becomes easier to discern the true from the false, in the mass of accumulated narrative; which, in itself, is evidence of progress in intelligence, that was wanting with reference to the preceding age when this was ushered in. The narratives themselves were records of faults, failures, utter ignorance and degradation, sometimes seeming to convey the idea that human nature was on the sure downward path and near its terminus; but seasoned with enough of hopeful omen to inspire confidence in a brighter future to be revealed.

The transition from the barbaric age to that which revealed the civilizations of ancient Greece and Rome, was affected so gradually, and with so many drawbacks, that the history of the period is blurred like that of the preceding. This indistinctness is the result of the same causes that, intensified, obliterated that of the barbaric age. Fable, exaggeration, breaks, omissions, all combine to make the history of this period unreliable. But the glory of the age of Pericles, and of Augustus, breaks in upon the vision, dazzling it with a splendor that ob-

scures the surrounding conditions, and the age that slowly outwrought such results from such beginnings.

The path the human race had trodden had trended upwards, with many steep acclivities to climb, many long stretches of more gradual incline to travel, and some deep vales to traverse, the horrors of which surpassed those that Bunyan's hero encountered in his vale of despondency. It had now reached a level where it wound through fields of delight, such as it had not before found, and which were but the entrance to the delightsome land beyond, above, on the mountain top. But, alas! there yawned yet a chasm that was to be overpast; and, in its passage, was obscured, for a space, the light the race was bearing onward. A record of decline is written on the ruins of Greece and Rome; the history, and causes of which, are well understood at the present day; written the same as on monuments of an age lost in the indistinct past; — the same as on Egyptian monuments of different ages, on those of old Assyria, of Palmyra in the desert, of Arabia Petrea, and multitudes of others. These all tell to every age, that lapses are the rule with nations and communities of mankind; which correspond to the stage of civilization to which the individual nation or community of nations, or tribes, has arrived.

Reciprocity of action between nations and communities of nations, like that between localities and sections, large and small, on the surface of a planet, determines that all suffer with one, and one with all; but, in a degree depending upon individual status. Yet, that portion of the race that has passed within the boundaries of civilization, into its broader light, revealed in the community of enlightened nations of the earth, have not to dread such lapses as marked former ages, when this radiance was dimmer, and diffused over smaller space. The volume and character of the light precludes the possibility of its extinction in a future, when spiritual illu-

mination is destined to be a power to add a strong and a perpetual stimulus to the flame that has already become a sun in splendor and power of illumination and fructification. The balance of power and influence is now with the civilized portion of the race; and this fact settles the destiny of all branches of it, that are not outside the pale of progress. Progress cannot cease on a planet at the stage of earth at present; but it can be delayed in various directions, stopped in certain channels, and confined, at certain epochs, to a select portion of the race; the selection being according to the law heretofore fully defined. Henceforth, when the advanced nations rest, it must be in the light of civilization. Their decline will be from the dizzy hights to intermediate plateaus, but not to the low plains.

END OF VOLUME II.

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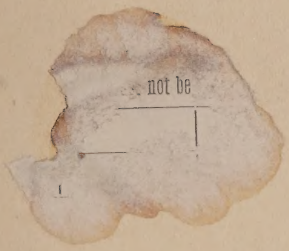
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